U. S. Department of Energy

Albuquerque Operations Office

FY 1999 Annual Performance Appraisal

of the

University of California's

Management and Operation of the

Los Alamos National Laboratory

David A. Gurulé, P.E.
Los Alamos Area Office Manager

TABLE OF CONTENTS

Department Of Energy FY 1999 Appraisal Of
The University Of California And Los Alamos National Laboratory

I. INTRODUCTION

The Department of Energy (DOE) and the University of California (UC or the contractor) agreed in 1997 to extend their contractual arrangements for the UC to manage Los Alamos National Laboratory (LANL or the Laboratory) through September 30, 2002.

This contract (Contract No. W-7405-ENG-36) utilizes a performance-based management system for Administrative and Operations functions. This management system is described in Appendix F of the contract and is based on the establishment of objectives and measures against which the UC will manage and the DOE will assess the Laboratory's performance.

A significant aspect of this management system is a self-assessment prepared by the contractor in the broad areas of Laboratory Management, Science and Technology, Operations Support and Administrative Systems. As required by the contract, DOE gives considerable weight to the results of the self-assessment as it conducts its own evaluation of UC's performance.

This report covers the DOE appraisal of the areas identified in Appendix F as well as observations made during the Business Management and Environmental, Safety and Health annual oversight reviews. Section A – Laboratory Management – consists of two broad performance areas, Laboratory Leadership and Regional Economic Partnership in Northern New Mexico. DOE's evaluation also includes other observations that were compiled during its review of UC's self-assessment by various DOE managers and program officers.

In the evaluation of Section B – Science and Technology – evaluations were solicited from HQ and AL program elements on the report titled "Evaluation of the Scientific and Technological Programs of Los Alamos National Laboratory" prepared by the UC President's Council on the National Laboratories. The programs to be evaluated were jointly identified by UC/LANL and DOE on a rotating basis such that all programs are evaluated within a three-year period. The UC Council employed the peer review concept in the development of their evaluation since it is the accepted norm in the scientific community.

Operations Support, Section C, consists of four functional areas: Environmental Restoration/Waste Management (ER/WM), Environment, Safety and Health (ES&H); Facilities Management; and Safeguards and Security.

Section D, Administrative Systems, covers five areas: Financial Management, Human Resources, Information Management, Property Management, and Procurement.

The performance assessment/numeric equivalent categories referenced in Appendix F were utilized to determine an overall numeric score for each program or functional area. Sections A, C and D of this report have been formatted so that the DOE evaluation is consistent with the performance standards agreed to by DOE and UC for each of the functional areas.

II. SUMMARY OF THE PERFORMANCE APPRAISAL

Executive Summary

This appraisal report addresses DOE's evaluation of the contractor's performance in the Laboratory Management, Science and Technology, Operations Support and Administrative areas for the period October 1, 1998, through September 30, 1999, except as otherwise noted. For the FY99 rating period, the University of California/Los Alamos National Laboratory received the adjectival rating of Excellent with the accompanying numeric score of 88% from the United States Department of Energy.

The DOE appraisal reflects input from DOE/HQ and the Albuquerque Operations Office, and utilizes knowledge gained through the Business Management Oversight Review (BMOR), the Environmental Safety and Health Review, project and program reviews, scientific peer review, and the UC self-assessment and its supporting documentation. The performance measurement criteria in use currently are designed to target areas of emphasis for UC attention. It is noted that the performance measurement criteria for FY99 are evolving into criteria that will reflect the overall level of performance of the systems that are appraised. As the Appendix F process continues to mature and evolve into core evaluation processes, effective measurement identification and assessment is expected to be enhanced, thus strengthening the partnership between DOE and the University of California.

The Laboratory Management rating for FY99 increased slightly over last fiscal year. This year's evaluation gave Laboratory Management an overall rating of Excellent. Some of the Laboratory Leadership areas requiring management attention are in the consistency in the implementation of plans across the entire Laboratory; a process to assure contract requirements and performance expectations are captured in the Laboratory's Operating Procedures; and the connectivity to planning documents was not demonstrated in the 10-year Site Plan. Issues surrounding LANL's indirect budget need attention as well. Instances of inadequate justification for incremental program resources were noted, as was the lack of consistency in formulation and documentation of indirect budgets. Immediate attention is needed in the development of an appropriate non-base incentive compensation program as outlined in Appendix A of the contract. The Laboratory's performance in the area of Regional Economic Partnership in Northern New Mexico was rated Outstanding. Other areas needing managerial attention are outlined under the subheading of Notable Laboratory Deficiencies and/or Recommendations.

Science and Technology at LANL was rated Excellent for FY99. Of the 20 LANL Divisions/Programs evaluated, 13 were rated at Outstanding, five at Excellent, and two at Good. Science and Technology (S&T) at LANL continued to report significant scientific accomplishments in FY99. The quality of science, engineering, and technology development was "world-class." LANL's technical divisions continued to be recognized as outstanding, most notably in achieving cutting-edge technology. However, as in past years, this fiscal year's programmatic performance, management, and planning measure ranked lower relative to the other three performance measures. This condition was reported in FY98, and the trend over the past three years appears to show no improvement. LANL's management needs to address the concerns noted in the appraisal results for programmatic performance. Appraisal results for S&T's "relevance" clearly showed that LANL recognized and fulfilled its primary mission centered on national security. Concerning cutting-edge research and development, LANL's Laboratory-Directed Research and Development (LDRD) program remained impressive with 70% of the FY99 LANL R&D awards, 31% of refereed publications, and 40% of Laboratory-wide patents.

In the Operations Support areas of the DOE evaluation, overall trends reflect some improvement over last fiscal year. The composite score for Operations Support is Excellent. ER/WM and ES&H were rated Excellent, Facilities Management received a rating of Good. Safeguards and Security received an Outstanding rating. While Satisfactory is the highest rating achievable based on the gradients for the S&S area, the numerical score of 91% earned by LANL's S&S program equates to an Outstanding rating in the general scoring scheme employed by the contract. The Safeguards and Security rating is consistent with the DOE/HQ independent reviews conducted at LANL. Although the reviews resulted in different adjectival ratings, this was more a function of the rating scales utilized for these reviews than differences in the review findings. All offices involved in these reviews agree that Safeguards and Security at LANL improved over the course of the appraisal year.

In the area of Environmental Restoration and Waste Management UC was rated an Excellent – 83%, a decrease over the FY 98 rating. In the Environmental Restoration area, UC continued to make progress in developing a validated baseline, improved and strengthened technical and regulatory strategies, and improved working relationships with the New Mexico Environment Department to name a few of the more significant successes. Continued focus on the deep well drilling effort is required until that effort is more

cost efficient and timely in completing wells. The Waste Management Program was very successful during FY 99. Significant success was achieved in disposal/treatment of newly generated and legacy waste work off. Especially noteworthy is the accomplishment of being the first site to ship to WIPP nonmixed TRU waste. Significant work with both the DOE and New Mexico Environment Department was required to accomplish the 17 shipments that went to WIPP. This effort was critical to the opening of WIPP and the success of a national Waste Management priority. Three areas within LANL received recognition for their efforts to minimize waste. The Transuranic Waste Inspectable Storage Project (TWISP), Waste Management in High Explosives Science and Technology (DX-2), and Laboratory-wide Waste Management, Pollution Prevention and Waste Minimization by the Environmental Management (EM) Division won Green Zia Awards for special achievement and commitment in environmental excellence given by the New Mexico Environmental Alliance. An area of focus and concern was the operation of the Radioactive Liquid Waste Treatment Facility where UC experienced schedule delays getting the new treatment operations running, and experienced operational upset conditions during startup. This has been an area of concern over the last few years and performance is not at an expected level, continued management attention is required in this area.

In the area of Environment Safety and Health UC was rated an Excellent – 83%, an increase over the FY98 rating. UC continued to implement its Integrated Safety Management System and appears to be on track for successful verification during FY 00. Especially noteworthy is the success in decreasing injury/illness rates at LANL; DOE rated this area as Outstanding. UC spent significant effort in focusing on injury illness and set institutional expectations that were achieved. Two improvement opportunities identified in the FY 98 Appraisal received significant management attention during the FY 99 rating period. LANL institutionalized improvements in its management of RCRA compliance program, set institutional goals, and is making progress in achieving them. The other area of improvement, Maintenance of the Authorization Basis, is an area that still requires management attention. DOE remains concerned about meeting the full requirements of ISM implementation with Safety Analysis Reports for the LANL nuclear facilities that do not meet current expectations and that have not been updated for significant multi-year timeframes. Another ISM area of concern is the number of TSR violations that continue to occur on an annual basis at LANL. On the positive side, LANL is attempting to update a significant number of authorization bases this year and LANL has developed an aggressive plan to address non-nuclear authorization basis issues. DOE's score of 59% is an improvement over the FY98 appraisal but shows that additional effort is needed. UC over the last few years has consistently improved in this area but not to the level of expected performance.

In FY99, Facilities Management earned a rating of Good, the same as in FY98. Within the five topical areas that comprise Facilities Management, Project Management received the principal attention, based on the significance of the project management activities. Two LANL projects, CMRU and NMSSUP, were placed on the Deputy Secretary's Watch List of projects with performance concerns. In the annual appraisal two Areas of Excellence and two Opportunities for Improvement were described for Project Management which received a grade of Good. Overall, DOE was optimistic that there were visible signals that LANL's project management program is improving. Equal in weight to Project Management is the Maintenance evaluation, which received a grade of Excellent; indicating the level of quality experienced in that subject area. A continuing concern over the cost attributed to the overhead in LANL's maintenance program was highlighted as an Opportunity for Improvement. Real Property Management received a grade of Excellent and Utilities/Energy Conservation received a grade of Outstanding, reflecting the overall level of performance in those two management areas. Finally, Physical Assets Planning received a grade of Marginal for the second year in a row, indicating that LANL has substantial work to perform to have a site planning team and process in place that will meet DOE's expectations.

The Office of Safeguards and Security (S&S) and the Office of Independent Oversight and Performance Assurance (OA) evaluations for FY99 reflected an improvement in LANL's Safeguards and Security program. All offices involved in these reviews agree that Safeguards and Security at LANL improved tremendously over the course of the fiscal year rating period. LANL received a Satisfactory rating from the

OA inspection in August 1999. Some corrective actions remained open, with milestones on schedule to be "green" by December 31, 1999. LANL went "green" by December 31, 1999. However, the area of unauthorized disclosures could be improved. The overall rating for the S&S Program is Outstanding or 91%.

Overall, the Administrative systems rating was Excellent, earning slightly less than last fiscal year. Financial Management and Human Resources received ratings of Excellent. Information Management, Procurement, and Property Management were rated as Outstanding.

Science And Technology

	Adjectival Rating	DOE Score/Rating (%)
Computing, Information, and Communications (CIC) Division	*Outstanding*	*98*
Chemical Science and Technology (CST) Division	*Outstanding*	*94*
Dynamic Experimentation (DX) Division	*Excellent*	*87*
Earth and Environmental Sciences (EES) Division	*Outstanding*	*94*
Engineering Sciences and Applications (ESA) Division	*Excellent*	*85*
Environment, Safety, and Health (ESH) Division	*Excellent*	*85*
Los Alamos Neutron Science Center (LANSCE) Division	*Good*	*71*
Life Sciences (LS) Division	*Outstanding*	*92*
Materials Science and Technology (MST) Division	*Outstanding*	*91*
Nonproliferation and International Security (NIS) Division	*Outstanding*	*90*
Nuclear Materials Technology (NMT) Division	*Good*	*78*
Physics (P) Division	*Outstanding*	*91*
Theoretical (T) Division	*Outstanding*	*98*
Technology and Safety Assessment (TSA) Division	*Outstanding*	*90*
Applied Theoretical and Computational Physics (X) Division	*Outstanding*	*90*
Accelerator Production of Tritium (APT) Project	*Outstanding*	*94*
Laboratory-Directed Research and Development	*Outstanding*	*95*
Technology Partnership Program (TPP)	*Outstanding*	*92*
Spallation Neutron Source (SNS) Project	*Excellent*	*85*
DP Stockpile Stewardship Program (SSP)	*Excellent*	*81*
Overall Rating/Score	**Excellent**	**89**

Department Of Energy FY 1999 Appraisal Of
The University Of California And Los Alamos National Laboratory

Laboratory Management

	Adjective	Maximum Points	Point Score	Rating
Laboratory Management	Excellent	50	44	87%

Operations Support

	Adjective	Maximum Points	Point Score	Rating
ER/WM	Excellent	50	42	83%
ES&H	Excellent	135	112	83%
Facilities Management (Special)	Good	50	39	78%
Security & Safeguards	Outstanding	50	46	91%

Administrative Systems

	Adjective	Maximum Points	Point Score	Rating
Financial Management	Excellent	33	28	86%
Human Resources	Excellent	33	29	88%
Information Management	Outstanding	33	30	91%
Procurement	Outstanding	33	30	90%
Property Management	Outstanding	33	30	92%

Total Rating And Grade

	Adjective	Maximum Points	Point Score	Rating
Laboratory Management	Excellent	50	44	87%
Science & Technology	Excellent	500	445	89%
Operations Support	Excellent	285	239	84%
Administrative	Excellent	165	147	89%
Total Grade	**Excellent**	**1000**	**875**	**88%**

A. LABORATORY MANAGEMENT

FUNCTIONAL AREA:	**PERFORMANCE ASSESSMENT:**
LABORATORY MANAGEMENT	**Excellent - 87%**

Performance Objective #1	**Excellent - 85%**

LABORATORY LEADERSHIP, IN SUPPORT OF LABORATORY MISSIONS, ENSURES THE STEWARDSHIP AND VIABILITY OF THE INSTITUTION. **(Weight = 70% Earned = 59.5%)**

1.1 ***INSTITUTIONAL STEWARDSHIP AND VIABILITY:*** *Evaluation of Laboratory senior management's approach, deployment and results for ensuring that the institution is capable of executing its current and future missions.* **(Weight = 70% Earned = 59.5%)**

DOE Rating: Excellent - 85%

1.1.a ***Planning:*** *Evaluation of management's approach for strategic planning that aligns Laboratory missions, core competencies, strategic direction, and funding sources with DOE strategic plans and objectives. The assessment will focus on achievement of the key objectives contained in the Laboratory's plans and how this information is reviewed with DOE.*
(Weight = 11 % Earned = 9.2%)

DOE Rating: Excellent - 84%

Weighting for Approach/Deployment and Results:
A/D = 40%
R = 60%

Gradients (see attachment at the end of the Laboratory Management section)

UC/LANL's planning effort was rated as Excellent. LANL's Institutional Plan (FY99 – FY04) demonstrated fundamental alignment with key components of DOE's Strategic Plan such as national security, environment, safety and health, direct mission-related programmatic projects, administrative stewardship, and overall operational management. LANL's planning efforts were implemented in a manner that incorporated partnering opportunities with DOE managers. For example, DOE managers were involved in the LANL Operations Working Group, Site Planning and Construction Committee, Safeguards and Security Steering Committee, etc. This approach was considered to be a significant improvement in LANL's planning process. The Laboratory Director is commended on his openness and willingness to work together with DOE management in the operation of LANL planning activities. However, some deficiencies were noted in programmatic planning (see the Science and Technology Section), and in the 10-Year Site Plan.

Areas of Concern:

- **LANL should concentrate its efforts in assuring that the implementation of its plans are successful across the entire Laboratory. Although efforts were made to increase the level of implementation of planning activities across the Laboratory, the results of**

these efforts were marginal with the notable exceptions of Safety and Safeguards and Security.

- **The 10-Year Site Plan did not demonstrate connectivity to planning documents. The site plan did not appear to demonstrate the requisite connections to missions, core competencies, strategic direction, and funding sources. The nuclear facilities planning document taken from Nuclear Weapons was a good start.**

1.1.b ***Establishing and Communicating Performance Expectations:*** *Evaluation of management's effectiveness in establishing and communicating performance expectations. Assessment will focus on communication with Laboratory line management and senior management at the DOE Headquarters, Operations Office, and UC that reinforces performance goals.*
(Weight = 11% Earned = 9.6%)

DOE Rating: Excellent - 87%

Weighting for Approach/Deployment and Results:
A/D = 40%
R = 60%

Gradients (see attachment at the end of the Laboratory Management section)

Overall, LANL made good progress in increasing communication with management within the Laboratory, DOE, and UC. The Laboratory Director and Deputy Director placed significant priority on communicating frequently with management across the three organizations. Regular meetings (Bimonthly On-Site meetings and Quarterly Partnering Meetings) were established with the DOE Operations Manager and Area Manager. As a result, DOE experienced an improved line of communication with the Laboratory Director and senior laboratory managers. Laboratory responsiveness to DOE issues and concerns also improved significantly. For example, LANL was the first DOE site to be certified by the New Mexico Environment Department to ship waste to the Waste Isolation Pilot Plant. In addition, LANL was the first site to complete its goal of 17 shipments during FY99. Other key areas of emphasis, such as Safety and Safeguards and Security, received improved communication, understanding, acceptance, and support from Laboratory management and the general employee population. LANL is expected to continue to apply this same level of rigor to other emphasis areas, such as project management, which continues to need reinforcement.

Areas of Concern:

- **LANL should implement and institutionalize a process to assure that contract requirements and performance expectations are captured institutionally in Laboratory operating procedures. DOE recommends that LANL revise its documented operating procedures to include an explanation of the correlation between the contract and performance expectations to the individual operating procedures. This should enhance the general Laboratory employee population's knowledge of performance expectations.**

1.1.c ***Stewardship of Assets:*** *Evaluation of Laboratory management systems for making decisions that address stewardship of programmatic and institutional assets. Assessment will include the impact of planning on decision making, the use of prioritization processes, asset management, resource allocation, etc.* **(Weight = 11% Earned = 9.6%)**

FUNCTIONAL AREA: LABORATORY MANAGEMENT

DOE Rating: Excellent - 87%

Weighting for Approach/Deployment and Results:
A/D = 40%
R = 60%

Gradients (see attachment at the end of the Laboratory Management section)

Stewardship of assets reflects the Departmental and Laboratory interest in maintaining the facilities and capabilities that exist, and enhancing them with new facilities and capabilities. Additional effort and investment in building and updating data regarding the state of the programmatic and institutional assets are necessary to maintain effective stewardship of these assets.

During the appraisal period, LANL management made critical decisions and reprioritized resources in an exceptional manner. For example, LANL management identified key issues that required immediate action, such as the Safeguards and Security Program reform, and managed resources that effectively addressed the identified needs. LANL management so effectively reprioritized and applied resources to this critical program that DOE awarded LANL a "Satisfactory" rating in the annual DOE Safeguards and Security inspection. "Satisfactory" is the highest rating achievable. In addition, LANL took a leadership role in the Tri-Laboratory working group, which worked to provide long-term computer security solutions for the entire DOE complex. These accomplishments were made during a period of intense national scrutiny of the LANL Safeguards and Security Program. UC and LANL management also self-disclosed deficiencies, reprioritized resources, and corrected deficiencies in their bank statement reconciliation process. LANL management absorbed additional costs, such as those related to the Los Alamos Land Transfer Project, and assumed responsibility for the fire suppression and emergency medical services program. LANL management continued to maintain or improve its overall performance with regard to Appendix F, while absorbing additional costs and focusing its efforts in critical areas such as Safeguards and Security.

Another area in which LANL excelled was LDRD funding to support core competencies. LANL ensured that about 90 percent of all the LDRD funds supported the national security mission and 100 percent of the funds support the core competencies of the Laboratory. All funds were used in accordance with DOE and Congressional policy and regulations. This year, the Deputy Laboratory Director for Science, Technology and Programs provided top management guidance for the LDRD planning and selection process for projects to ensure alignment with mission requirements.

Areas of Concern:

LANL's indirect budget process is driven by a top-down approach whereby only the incremental change from prior year is justified, instead of a bottom's up justification of all elements of cost in the indirect base. This process does not allow for a complete reassessment of the indirect budget base each fiscal year. As a result, the appropriateness of the direct and indirect budget cost estimates are not evident, and potential cost savings may not be achieved. The result was, during FY99, two reviews performed by DOE/AL's Office of the Field Chief Financial Officer, disclosed areas of concern regarding the lack of consistency in formulation and documentation of the

indirect budgets. The reviews disclosed instances of inadequate program justification for incremental program support increases.

FUNCTIONAL AREA: LABORATORY MANAGEMENT

1.1.d ***Effective Resource Management****: Evaluation of management's efforts to effectively manage funding and staff resources consistent with DOE and Laboratory goals. Assessment will focus on performance results which may include improvements in cost effectiveness such as the ratio of S&T to A&O staff, and other productivity or re-engineering indicators.*
(Weight = 11% **Earned = 9.2%)**

DOE Rating: Excellent - 84%

Weighting for Approach/Deployment and Results:
A/D = 40%
R = 60%

Gradients (see attachment at the end of the Laboratory Management section)

DOE focused the evaluation for this measure on addressing the effectiveness of LANL's Construction Project Management activity. Evaluations noted concerns about weak project management internal controls. For example, during FY99, a General Plant Project for security upgrades at TA-16 was initiated and completed by LANL without a DOE Project Authorization. Project Authorization was sought from DOE after this project was completed essentially. An investigation of this situation resulted in DOE concerns about funding determinations that support construction activities, as well as adherence to LANL's own Laboratory Implementing Requirement (LIR) for construction project management. Funding determination issues also surfaced on other construction projects during FY99. Establishment of a centralized process for funding determinations on construction is needed. Additionally, a centralized process for verification of applicability of LANL's construction Project Management LIR does not exist. Establishment of these two centralized functions is necessary from DOE's perspective and will be pursued during FY00.

DOE noted that management of DP-20 resources was generally outstanding during this period with some notable exceptions. DOE's Defense Programs noted that Pit Production Readiness suffered from ineffective laboratory management and dedication to meeting program objectives. The Laboratory needs to assure that both their design agency and production agency elements are managed and driven towards the total goal of certifying a newly manufactured pit, not only meeting a critical national security requirement, but also reconstituting the capability to manufacture war reserve pits within the nuclear weapons complex to assure the stockpile can continue to be supported. Secondly, DOE's Defense Programs notes that resources from other programs are meant to - complement DP-mission work. However, an evaluation full-cost recovery for facilities was not always exercised. DOE concluded that, "It is imperative that work for non-DP programs [be] performed at full-cost recovery to the extent that funds exist (rather than executing full scope and trying to recover full costs after the fact)."

In 1996, Los Alamos National Laboratory undertook a project to acquire and install the PeopleSoft system for managing human resources and related data. After three years and the expenditure of $3.2 million, the Laboratory did not implement the system. Planning, coordination and management attention to the PeopleSoft project was inadequate and the difficulty of integrating the software with other existing Lab systems was underestimated. Starting in August 1999, The Gartner Group was hired to evaluate the project's status and history. This consultant recommended that the project be terminated. Acting on this recommendation and their own internal analysis, LANL decided to cancel the project. This cancellation is currently the subject of a draft OIG

report on "Implementation of Integrated Business Information Systems Within the Department of Energy." Based upon the draft IG report, it appears the Department received no appreciable benefit from the $3.2 million invested at UC.

Area of Concern:

Appendix A to the contract requires the Parties to "negotiate in good faith to develop an appropriate non-base building incentive compensation program" for Laboratory Senior Management. Negotiations have not commenced to develop this program. Prompt attention is needed to address this important contractual matter.

1.1.e ***Community Relations:*** *Evaluation of management's awareness of public concern regarding Laboratory operations. Assessment will focus on management's effectiveness in addressing community issues in a proactive manner.* **(Weight = 11% Earned = 8.8%)**

DOE Rating: Excellent - 80%

Weighting for Approach/Deployment and Results:
A/D = 40%
R = 60%

Gradients (see attachment at the end of the Laboratory Management section)

Agreements:

- Evaluation factors to be considered under this Performance Measure will include the annual survey described in Clause 5.14 of the prime contract.

UC and LANL embarked aggressively on processes to increase awareness of community concerns regarding Laboratory operations. LANL clearly improved its community relationships. Increased regional involvement with small businesses and increased communication with the myriad of municipal and tribal governments was evident. Although the self-assessment does not mention it, the Laboratory has made progress in improving the effectiveness of its dealings with the Citizens' Advisory Board for environmental restoration.

The 1999 Community Leaders' Survey showed slight improvement overall (statistically insignificant) in the community leaders' impression of LANL as a corporate citizen. Criticism remained that LANL "talks the talk, but does not walk the walk" (direct quote from the survey). During this period, DOE noted that LANL made tremendous strides in community outreach. Community outreach managers were placed in Los Alamos, Rio Arriba, and Santa Fe Counties. The annual Community Leaders' Survey was considered successful by DOE because the survey accomplishes two important goals. It was successful in identifying the issues considered most important by the community leaders (education, jobs, drug abuse, etc.); and provided important feedback to LANL management on how LANL was viewed by the community. LANL management should focus more on responding to community input and reporting LANL's actions and results back to the community. Significant efforts and accomplishments were made by LANL, especially in the areas of educational outreach; however, those improvements were not widely recognized.

FUNCTIONAL AREA: LABORATORY MANAGEMENT

1.1.f ***Accountability and Commitments:*** *Evidence that systems ensure major commitments are met and information on status is timely and complete and that these systems allow informed management action.* **(Weight = 15% Earned = 13.1%)**

DOE Rating: Excellent - 87%

Weighting for Approach/Deployment and Results:
A/D = 40%
R = 60%

Gradients (see attachment at the end of the Laboratory Management section)

Agreement:

- Evaluation to include management's efforts to support implementation of:
  - Integrated Safety Management Implementation
  - Safeguards & Security Operations Office Survey Corrective Actions
  - Year 2000 Preparation
  - Land Transfer Support
  - Internal Audit

UC/LANL's overall performance was rated as Excellent. A performance narrative in each specific area follows:

- **Integrated Safety Management (ISM) Implementation**
  LANL continued to make progress in implementing ISM during FY99. DOE conducted an ISM Verification on October 12-22, 1999. The results of that verification will be reflected in the FY00 Laboratory Appraisal. The LANL ISM System Description created a clear vision of a safety management system that, when implemented, should meet DOE expectations expressed in the contract. LANL management commitment reflects that they understand where they need to go and how to get there. However, LANL management does not currently have a focusing mechanism to assist in achieving the consistency and continuous process improvement at the highest levels of implementation. The feedback and improvement processes components lack integration because they are generally compliance-focused. Thus, they do not describe a process for compiling the data to provide feedback and improvement to the ISM System. LANL needs to strengthen the integration between the Facility Tenant Agreements, the Facility Safety Plans, and the Hazard Control Plans. A second significant shortfall in implementation is the lack of adequate mechanisms to develop and implement nuclear and non-nuclear facility authorization-basis documentation.

- **Safeguards and Security Operations Survey Corrective Actions**
  LANL has an excellent program in place for ensuring corrective actions are developed through aggressive action plans, and completed in a timely fashion for deficiencies identified/discovered during all Safeguards and Security surveys and DOE findings. LANL management is commended for its excellent support in this important program.

- **Year 2000 Preparation**
  The Year 2000 is a management problem as well as a technological one. Though LANL achieved its goals set for the rating period, there were significant managerial issues that had to be addressed to get "on schedule". Significant issues were reported with the identification and assessment of the safety systems for the

FUNCTIONAL AREA: LABORATORY MANAGEMENT

Laboratory. A corporate commitment to this problem was not seen until DOE Headquarters expressed great concern over the lack of rigor, commitment, and timeliness of the safety systems. True senior management commitment was not evident until this occurred. A recovery schedule was identified and, subsequently, completed on schedule.

- **Land Transfer Support**
  LANL management provided outstanding support to the Los Alamos Land Transfer Program. Funding, as well as multidisciplinary professional support, was provided in preparing the Environmental Restoration Report, Environmental Impact Statement, cartography, other technical support, and production of informational materials at several public meetings. LANL is commended for its outstanding support of this important area.

- **Internal Audit**
  LANL's internal audit function established a sound systematic approach for planning and conducting internal audits throughout the year based on a risk-ranked methodology. In particular, LANL's internal audit plan took into consideration the perspectives of the UC, DOE management and the DOE OIG. The plan included audit data sheets that described the objectives and resources required for each audit scheduled. As a result, LANL's audit plan was approved by DOE/AL and forwarded to the OIG. LANL ensured also that any revisions to its original audit plan were written and provided to AL with detailed explanations.

  The internal audits were performed in accordance with Institute for Internal Auditors (IIA) standards. LANL provided copies of all of its completed final audit reports to the DOE, which included comments from Laboratory management. The working relationships among the internal audit staff, the DOE, and the DOE OIG's office were good and are improving. Because of issues arising regarding internal controls and the reconciliation of accounts, DOE recommends that LANL increase its efforts to strengthen internal controls and that the Internal Audit Office conduct periodic reviews to ensure that LANL financial management controls are effective.

Performance Objective #2	**Outstanding – 92%**

REGIONAL ECONOMIC PARTNERSHIP IN NORTHERN NEW MEXICO: LANL will develop (in concert with UC and DOE) an effective partnership with regional entities to enhance economic development and diversification. **(Weight = 30% Earned = 27.6%)**

2.1 ***REGIONAL ECONOMIC PARTNERSHIP:*** *Laboratory leadership establishes an effective program to partner with regional entities to enhance economic development and diversification.*
(Weight = 30% Earned = 27.6%)

2.1.a. ***Regional Economic Partnership:*** *Evaluation of the effectiveness of the Laboratory's contribution to regional efforts in economic development and diversification. Evaluation factors to be considered under this Performance Measure will include an evaluation of performance in the areas this performance measure include those described in Appendices J, M, and N of the prime contract.* **(Weight = 30% Earned = 27.6%)**

DOE Rating: **Outstanding - 92%**

FUNCTIONAL AREA: LABORATORY MANAGEMENT

Weighting for Approach/Deployment and Results:
A/D = 60%
R = 40%

Gradients (see attachment at the end of the Laboratory Management section)

Overall, LANL made significant contributions to regional efforts in economic development and diversification during FY99. The Los Alamos National Laboratory Foundation awarded $2.5M in educational outreach and educational enrichment grants in FY 1999 to educational institutions. The LANL Regional Education Plan was implemented providing $4.4M to support 24 education programs. Approximately 1,740 students and faculty directly participated and benefited from the science education programs. The results of the September 1999 Community Leaders' Survey indicate that 62 percent of community leaders view LANL favorably as a corporate citizen, although 60 percent of the responses indicate dissatisfaction with LANL's responsiveness to the concerns of the communities. In addition, responses from Rio Arriba community leaders indicated a need for increased communication, involvement, and responsiveness. DOE conducted several personal visits with elected officials, educators, and other community leaders as part of the Regional Involvement Special Assessment. Feedback received during these visits demonstrated that community leaders were generally not well informed or aware of LANL's efforts and achievements, while educational leaders were well aware of the successes achieved by LANL's education programs. The community leaders have the perception sometimes that LANL programs did not have a beneficial impact on their community.

- **UC provided staff support and in-kind support to numerous economic development organizations, community organizations, and participated in several community fairs and fiestas. UC engaged the UC Davis Community Design and Planning Consortium to develop and implement a Geographic Information System data collection and land use optimization computer modeling tool for Rio Arriba County and the City of Española. UC funded this effort at a level of $167K, and successfully assisted in obtaining a $200K U.S. Environmental Protection Agency challenge grant augmented by $256K in matching services from partners in and around California. Notably, community leaders were significantly more aware of UC's presence in the community than they were two years ago.**

- **The Technology Commercialization Office (TCO) had a significant responsibility in terms of increased regional involvement by LANL in Northern New Mexico. Under the terms of Appendix M of the current University of California contract to manage and operate LANL, the TCO performance indicators are designed to measure both activity and outcomes. The results of the review of the performance of the TCO for FY99 showed progress in all measures. Moreover, the TCO kept AL informed of it activities and progress throughout FY99 and reacted very positively to DOE guidance. The FY99 performance results are as follows:**

  - **Assisted 50 companies involving over 500 interactions;**
  - **Helped 20 start-up companies;**
  - **Counted 78 new jobs in Northern New Mexico resulting from TCO efforts;**
  - **Made significant progress on six licensing/equity actions;**
  - **Measured a 95 percent satisfaction level from companies assisted;**

FUNCTIONAL AREA: LABORATORY MANAGEMENT

- **Conducted three entrepreneurial training/workshops; and**
- **Provided assistance and guidance on launching the "Research Park."**

In addition to the outstanding performance in meeting the Appendix M list measures, the TCO worked closely with various economic development boards, committees, and municipal organizations to promote the economic diversification of Northern New Mexico. In FY99, the TCO continued to perform at an outstanding level.

Finally, in FY98, DOE noted a concern about the apparent slow process in licensing and leave-approval process. In FY99, there was improvement; however, we believe this still needs further attention in FY00.

UC/LANL established the Los Alamos National Laboratory Foundation (Foundation) on April 17, 1997. The Foundation was successful in establishing three new grant programs. The Foundation received funding support from DOE totaling $15.2M ($9.1M through the DOE/UC contract and $6.1M from other DOE appropriations) for the period 1998 through 1999. In addition, the Foundation raised an additional $206K through private fundraising efforts. During the two-year assessment period, the Foundation disbursed $5.4M for educational outreach and educational enrichment grants and scholarships in support of regional education programs. Face-to-face meetings between DOE and professional educators in NNM provide a strong indication that the efforts of the Foundation were well received and appreciated.

The DOE recognizes that due to the uncertainties related to availability of future federal funding, the Foundation should increase its efforts to augment its future funding through increased efforts in private fund-raising activities. This concept has been expressed to UC/LANL. It is DOE's understanding that the Foundation does intend to increase private fund-raising activities in the future.

Based on the survey results and other community feedback, the Foundation is positively viewed by the community (especially professional educators) as a significant commitment of resources and efforts on behalf of important community needs and interests.

Notable Laboratory Accomplishments and/or Recommendations:

- **The LANL Institutional Plan was considered outstanding by DOE's Defense Programs and Office of Science, and was used as an example for showing alignment to the DOE Strategic Plan for other laboratories to follow. The Deputy Laboratory Director for Science, Technology and Programs provided top management guidance to improve the LDRD project selection process and the alignment to Laboratory missions.**
- **The work in assisting the Los Alamos Research Park effort was a significant community contribution.**
- **Major accomplishment within Human Resources (HR) include: products and process improvements, workforce planning, leadership training, labor relations, and compensation practices; reengineering of hiring process; establishment and implementation of new Salary Management System; documentation of compensation practices and making the information available to all employees on the HR Web page; and establishment of the HR Academy and Leadership Center.**

Notable Laboratory Deficiencies and/or Recommendations:

FUNCTIONAL AREA: LABORATORY MANAGEMENT

- **LANL should revise their Regional Purchasing Preference Program Guidelines to meet the requirements of Appendix J. In DOE's opinion, therefore, LANL's Regional Purchasing Preference Program does not fully meet the intent or requirement of Appendix J.**

- **LANL should increase its efforts to communicate the results of its actions to community leaders.**

- **In FY00, DOE requests that LANL provide more activity in the area of identifying and maturing laboratory technologies for commercial use. This is a slight departure from the priorities given to the Technology Commercialization Office in FY98 and FY99.**

- DOE notes that during FY99, LANL reassigned the responsibility for validating self- assessments from the Audit and Assessments Office to the Quality Office. DOE is concerned that the cross-cutting expertise that existed in the Audit and Assessments Office must now be developed in the Quality Office in order to assure the same rigor and expert validation of assessments.

Open Recommendations from Prior Years:

- **In FY98, DOE noted a concern about the apparent slow process in licensing and leave-approval process. In FY99, there was improvement. This area may need further attention in FY00.**

Other Observations:

Travel Costs

A GAO travel audit report issued in April 1999 cited that travel cost reductions did not occur (in part) because of a lack of management by DOE's M&O contractors. It brought into question also M&O practices in regard to certain high price travel costs, and long-term temporary assignments. LANL conducted a review of travel practices, adjusted some travel policies, and has taken other steps to address this audit finding. LANL needs to ensure the actions they have taken adequately address these issues.

Counter Intelligence

During FY99, the Office of Counter Intelligence (HQ) conducted an on-site review of LANL's counter intelligence program. As a result of this review, 11 findings were cited including 33 separate recommendations. The Laboratory established corrective action plans for each recommendation with implementation dates and milestones. These plans were submitted to HQ/CN-1 and received their approval. The Laboratory will be reinspected at the end of April 2000.

Project Management

- **LANL attained several significant accomplishments that strengthened project management. These included: the formation of a separate Project Management Division, an increase in qualified project management staff, an internal project review process, the recognition of line and program management ownership of projects, and the development of standardized project management processes and procedures.**

- **Project management opportunities exist for LANL to improve processes for tracking and resolving project management issues and deficiencies. Examples include:**

increasing the involvement and participation in project management by senior management, and by improving the integration of program, line, and project management functions.

A second category of more process-oriented opportunities include:
- **areas of construction program and project planning;**
- **updating and enhancing the Laboratory Implementing Requirement for project management;**
- **continued improvement in technically qualified project management staff;**
- **continued improvements in project management procedures;**
- **increasing the accuracy and timeliness of project reporting; and**
- **ensuring more complete participation by all responsible groups in LANL's monthly project reviews.**

Programmatic Management

Upper level program managers for DP raised several performance issues concerning the lack of LANL management attention. Each of these have been individually addressed in the Science and Technology Appraisal Section. Yet, taken together, these deficiencies are indicative of a disconcerting lack of leadership and management focus regarding the DP mission goals. Further attention is needed by Laboratory management concerning the following areas:

1) **Hydrodynamic experiments: These are one of the most important sets of experiments for the Stockpile Stewardship Program, and they are key to the planning and funding of major laboratory facilities. Yet, Laboratory management failed to engage with DOE and the other principle laboratory on this planning effort.**

2) **Development of DP Campaigns: During FY99, LANL inadequately addressed the fundamental planning tools related to the development of the DP campaigns. This effort was handled primarily by a few people at the Laboratory, and was not made a widespread or fundamental part of the management process. As a result, requested documents were late, the program coordination between divisions at the Laboratory was inadequate, and Stockpile Stewardship Programs suffered.**

3) **Transfer of the W80 to Lawrence Livermore National Laboratory (LLNL): The "Integrated Plan" was agreed to in-principle and with respect to many details by top Laboratory management in meetings with DP management. Yet, in certain respects, the follow-through for the Integrated Plan was less than exemplary. LANL was not working appropriately with LLNL, the W80 was not being expeditiously transferred, and the hydro facilities was not receiving the necessary attention to design and planning**.

4) **LANSCE was a banner facility for the laboratory for both attracting scientific talent and, recently, for performing work critical to the weapons program. It is expected to be an integral part of the Advanced Hydro Facility. Yet, it is under-funded, and had a history of frequent shutdowns for operational and safety concerns. Some of these problems appear to be attributed to the lack of management focus on their key programs.**

FUNCTIONAL AREA: LABORATORY MANAGEMENT

The performance expectation for each performance measure will use the scoring criteria indicated in Table 1 below. Each performance measure indicates the relative weights between the Approach/Deployment criteria and the Results criteria.

Table 1, Appraisal Scoring Guidelines for Laboratory Management

Narrative Rating	Score Range	Approach/Deployment	Results
Outstanding	90 - 100%	• a sound systematic approach, fully responsive to all requirements. • a very strong fact-based improvement process is a key management tool; strong refinement and integration - backed by excellent analysis. • approach is fully deployed without significant weaknesses or gaps in any areas or work units.	• current performance is excellent in most areas of importance to the key business requirements. • excellent performance levels in most areas. • strong evidence of industry and benchmark leadership demonstrated in many areas.
Excellent	80 - 89%	• a sound systematic approach, responsive to the overall purposes. • a fact-based improvement process is a key management tool; clear evidence of refinement and improved integration as a result of improvement cycles and analysis. • approach is well developed, with no major gaps; deployment may vary in some areas or work units.	• current performance is good to excellent in most areas of importance to the key business requirements. • most improvement trends and/or current performance levels are sustained. • many to most trends and/or current performance levels show areas of leadership and very good relative performance levels.
Good	70 - 79%	• a sound systematic approach, responsive to the primary requirements. • a fact-based improvement process in place in key areas; more emphasis is placed on improvement than on reaction to problems. • no major gaps in deployment, though some areas or work units may be in the very early stages of deployment.	• improvement trends and/or good performance levels reported for many to most areas of importance to the key business requirements. • no pattern of adverse trends and/or poor performance levels in areas of importance to the key business requirements. • some trends and/or current performance levels show areas of strength and/or good to very good relative performance levels.
Marginal/ Unsatisfactory	50 - 69%	• beginning of a systematic approach to the primary purposes. • early stages of a transition from reacting to problems to a general improvement orientation. • major gaps exist in deployment that would inhibit progress in achieving the primary purposes.	• early stages of developing; some improvements and/or early good performance level in a few areas.

FUNCTIONAL AREA: LABORATORY MANAGEMENT

B. SCIENCE AND TECHNOLOGY

FUNCTIONAL AREA:	**PERFORMANCE ASSESSMENT**
SCIENCE AND TECHNOLOGY	**Excellent – 89%**

Methodology

Appendix F of the DOE/UC contract requires that DOE annually appraise UC's performance in the area of Science and Technology (S&T). The methodology DOE used to evaluate UC/LANL's performance during FY99 integrates two separate tools as follows:

(1) Review of LANL's Science and Technology Assessment Report for the period of July 1, 1998 through June 30, 1999; and
(2) Direct performance evaluation by various programmatic offices including DOE, Department of Defense (DoD), and Florida State University (FSU).

LANL Science and Technology Assessment. LANL provided a "Science and Technology Assessment" report that combined the results of external peer reviews conducted by Division Review Committees (DRCs) and additional information gathered by LANL's Office of Science and Technology Based (STB) Programs. The basis of the UC/LANL evaluation of S&T activities at LANL was the objectivity of the DRC external peer review process. In addition to external peer review performance information from the DRCs, LANL also provided performance information relative to awards, publications, patents, etc. The STB Programs assessment report was sent to the UC President's Council for review, and possible revision, before it was officially delivered to DOE as the UC self-assessment of S&T Programs at LANL. In the past years, very little revision by the UC President's Council occurred that significantly altered the report issued by the LANL STB Programs Office. This is important because the basic document used in the annual DOE appraisal of S&T Programs at LANL was the STB Program Office report.

In accordance with the contract, DOE validated the annual UC/LANL self-assessment through review by cognizant DOE program officials and other LANL customers. The process employed by UC/LANL required that the LANL S&T assessment covering the period of July 1, 1998, through June 30, 1999, be conducted under the guidelines developed by UC's Office of the President. The guidelines stress review of LANL organizations by peers according to the following four criteria:

- Quality of science;
- Programmatic performance and planning;
- Relevance to national needs and agency missions; and
- Performance in technical development and operation of major research facilities.

UC and LANL conducted the review based on the 15 scientific and technical divisions of LANL. Additionally, other major program/project offices participated in the self-assessments, namely, the Laboratory Directed Research and Development Office, the Technology Partnerships Program, and the DP Stockpile Stewardship Program. A separate DRC reviewed each division between August 1998 and June 1999. Each DRC provided an overall rating according to these descriptors:

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Adjectival Descriptor		Numeric Value
Outstanding	(O)	95
Outstanding/Excellent	(O/E)	90
Excellent	(E)	85
Excellent/Good	(E/G)	80
Good	(G)	75
Good/Marginal	(G/M)	70

DOE evaluation. The following "Results" section contains the DOE evaluation of LANL's divisional and program/project performance. More than 70 separate evaluations of LANL's performance by DOE and other LANL customers were compiled to form this evaluation. DOE used the four criteria noted above and the following rating scale:

Narrative Rating	Numeric % Equivalent
Outstanding	90 – 100
Excellent	80 – 89
Good	70 – 79
Marginal	60 – 69
Unsatisfactory	59 – or less

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

The following LANL Divisions, their associated programs, and other major cross-divisional DOE programs were explicitly evaluated:

Division/Major Program	Programs Assessed by DOE
Computing, Information, and Communications (CIC)	• Accelerated Strategic Computing Initiative (ASCI) • HPCC Grand Challenges
Chemical Science and Technology (CST)	• Nonproliferation • Environmental Sciences • Energy Research
Dynamic Experimentation (DX)	• DARHT • NTS & Subcritical Experiments • High Explosives Safety
Earth and Environmental Sciences (EES)	• Atmospheric Sciences • Yucca Mountain Project • Basic Energy Sciences • Los Alamos Environmental Restoration
Engineering Sciences and Applications (ESA)	• Stockpile Stewardship • Engineering Analysis • Weapon Materials & Manufacturing • Design Engineering
Environment, Safety, and Health (ESH)	• Risk Communications and the Public • Safety Delivery • UC/DOE Contract Special Provisions • Safety Systematics
Los Alamos Neutron Science (LANSCE)	• Facility Operations and User Accomplishments • Lujan Center Science and Technology • Short Pulse Spallation Source (SPSS) • Radioisotope Production
Life Sciences (LS)	• Genomics
Materials Science and Technology (MST)	• Properties of Metals for Nuclear Weapons • Weapons Materials Aging Phenomena • Basic Properties of Energetic Materials • Transportation and Energy • DoD Programs • National High Magnetic Field Laboratory
Nonproliferation and International Security (NIS)	• Nuclear Sciences (aka Nonproliferation & Arms Control) • Space Sciences Programs (aka Research & Development) • International Technology Programs
Nuclear Materials Technology (NMT)	• Materials Stabilization • Plutonium Disposition • Waste Treatment • Nuclear Materials Management
Physics (P)	• Stockpile Stewardship • Biophysics • Nuclear Physics • Magnetic Fusion • Applied Plasma • Remote Sensing

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Division/Major Program	Programs Assessed by DOE
Theoretical (T)	• Nuclear Theory and Applications • Atomic and Optical Theory • Medium Energy Physics Theory • Theoretical Astrophysics/ASCI • Elementary Particles & Field Theory
Technology and Safety Assessment (TSA)	• Performance & Reliability Evaluation (PREDICT) • Component Materials Aging & Degradation • Assessment of NW for Agent Defeat • NEPPS Documentation • Weapons Response Modeling • Near Field Dispersion from Godiva • Process Dose Estimation • Pit Manufacturing Requirements
Applied Theoretical and Computational Physics (X)	• Weapons—Stockpile Systems • Weapons—ASCI (Strategic Computing & Simulation) • Weapons—Research and Development
Civilian Industrial Technology Office	• Technology Transfer, including Designated User Facilities and Deployment Centers
Spallation Neutron Source Project	• All activities
Laboratory Directed Research and Development	• All activities
Accelerator Production of Tritium Project	• All activities
DP Stockpile Stewardship Program	• ADaPT

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Results

LANL's overall S&T performance was rated as Excellent. The distribution of ratings among the LANL divisions/programs is shown below:

Division/Program	Rating
Computing, Information, and Communications (CIC) Division	Outstanding
Chemical Science and Technology (CST) Division	Outstanding
Dynamic Experimentation (DX) Division	Excellent
Earth and Environmental Sciences (EES) Division	Outstanding
Engineering Sciences and Applications (ESA) Division	Excellent
Environment, Safety, and Health (ESH) Division	Excellent
Los Alamos Neutron Science Center (LANSCE) Division	Good
Life Sciences (LS) Division	Outstanding
Materials Science and Technology (MST) Division	Outstanding
Nonproliferation and International Security (NIS)	Outstanding
Nuclear Materials Technology (NMT) Division	Good
Physics (P) Division	Outstanding
Theoretical (T) Division	Outstanding
Technology and Safety Assessment (TSA) Division	Outstanding
Applied Theoretical and Computational Physics (X) Division	Outstanding
Accelerator Production of Tritium Project	Outstanding
Laboratory Directed Research and Development Program	Outstanding
Civilian Industrial Technology Office	Outstanding
Spallation Neutron Source Project	Excellent
Stockpile Stewardship Program - ADaPT	Excellent

Selected notable accomplishments included:

- Installation of Nirvana Blue and the Accelerated Strategic Computing Initiative (ASCI) Blue Mountain computers;
- Sampling plan for non-mixed transuranic waste (TRU) waste in support of the Waste Isolation Pilot Plant (WIPP) startup;
- Execution of the Cimarron experiment;
- Development, design, conduct, and analyses of the Busted Butte experiment;
- Supporting the development of the Instrumented High Fidelity Joint Test Assembly for the Core Surveillance Program;
- The firing of the Proton Radiography implosion experiment, Billi G;
- LANL exceeded their Joint Genome Institute FY99 sequencing goals;
- The commissioning of the 60 Tesla long-pulse magnet;
- World class, state-of-the-art technology development in remote sensing: Remote Ultralow Light Level Imaging (RULLI), Hyperspectral Infrared Imaging System (HIRIS), Chemical Analysis by Laser Interrogation of Proliferant Effluents (CALIOPE) and Multispectral Thermal Imager (MTI);
- U.S. patent for the imaging bolometer;
- Near Field Dispersion from Godiva Analysis, performed in support of continued operations of the Los Alamos Critical Experiment Facility (LACEF) Godiva assembly; and
- 100 mA beam through Low Energy Demonstration Accelerator (LEDA).

Selected notable deficiencies included:

- LANL failed to integrate the planning, scheduling, and implementation of the dynamic experiments program. Management attention and corrective action is required;

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

- Regarding the DOE- Japan Atomic Energy Research Institute (JAERI) Collaborative Program, LANL should put into place a management, team and approach fully suited to a SC supported nuclear facility. DOE's Office of Fusion Energy Sciences (OFES) was displeased, not only that there will be a quadrupling of costs to DOE for the Tritium Systems Test Assembly (TSTA), but also that LANL broke this news less than six weeks before the beginning of the new fiscal year, causing serious funding difficulties;
- The multi-divisional DP Pit Production Readiness effort was rated at Marginal primarily because of ineffective laboratory management and dedication to meeting program objectives. Although improvement has been made subsequent to this appraisal toward accomplishment of manufacturing objectives, serious issues remain with the laboratory in assuring a well managed and focused program effort towards certification of a pit. The Laboratory needs to assure that both their design agency and production agency elements are managed and driven towards the total goal of certifying a newly manufactured pit, not only meeting a critical national security requirement, but also reconstituting the capability to manufacture war reserve pits within the nuclear weapons complex to assure the stockpile can continue to be supported;
- Performance in the technical development, operation, and management of the Los Alamos Neutron Science Center and the linac part of the Spallation Neutron Source project;
- There needs to be more advanced planning and lead time for budgetary areas that impact the National High Magnetic Field Laboratory (NHMFL). The recommendation is that there must be greater coordination between LANL leadership and the NHMFL concerning all budget changes and that the impact of such changes on the capabilities of the NHMFL to deliver the required user support must be discussed before they are implemented;
- Significant productivity loss was experienced as a result of the TA-18 Facility stand down;
- LANL needs to improve responsiveness to requests for information and participation in HQ initiatives, e.g., Materials Readiness Campaign;
- Internal management and external contractors management problems resulted in serious delays on the Multiplicity Vertex Detector (MVD) and Muon Arm projects, major components of Relativistic Heavy-Ion Collider (RHIC) detector construction; and
- LANL needs to recognize and support the ground-based nuclear test monitoring and engineering program.

Additional Concerns:
Los Alamos has multiple ASCI applications all working toward specific stockpile stewardship deliverables and milestones. In the case of one December 31, 1999 "burn code" milepost, Los Alamos failed to meet this milepost on time. This milepost involved a single Los Alamos ASCI application, and while all physics modeling capabilities were met, the project team was unable to complete the final debugging stage of the calculation on schedule. LANL anticipates meeting this milepost by June 20, 2000. While this missed milepost is beyond the official FY99 appraisal, DOE wants to ensure that LANL is aware of programmatic concerns regarding failure to meet deadlines.

Following is the DOE evaluation of LANL's S&T performance by LANL division and major programs.

Office of Scientific and Technical Information Reporting:
According to the FY99 LANL self-assessment, most LANL technical divisions are providing technical reports to the Office of Scientific and Technical Information (OSTI). However, it is evident that there are many areas in which LANL needs to improve its process. Many Divisions did not provide information on their progress with regard to scientific and technical reporting, either because they did not have adequate information available, or because they chose not to provide any information all together. In order to improve the process, the LANL technical divisions need to focus on making a determination of how many reports are required by Sponsors. Of those required reports, a determination needs to be made as to which would be appropriate to submit to OSTI. LANL is commended for utilizing OSTI's electronic announcement record to submit over 200 technical reports in paper format. However, LANL also needs to transition into submitting technical reports in electronic formats. Finally, in order for this program to be successful, it is important for the Director's Office to emphasize to all Division Directors the Laboratory's policy with regard to scientific and technical reports and compliance with DOE policy.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Computing, Information, And Communications (CIC) Division

OVERALL DOE ADJECTIVAL RATING: Outstanding **NUMERICAL SCORE: 98**

Division CIC	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	O	O	O	O	O
DOE	O	O	O	O	O

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Outstanding. The LANL applied mathematics research program is one of the best applied mathematics research efforts in the country. LANL conducted research in the areas of mathematical modeling, numerical analysis, parallel algorithm development, and large-scale scientific computing that was directed at solving large-scale scientific and engineering problems of importance to LANL, DOE, and the nation. LANL was also actively engaged in research involving Accelerated Strategic Computing Initiative (ASCI), Strategic Simulation Initiative (SSI), and the MICS predictability initiative. Additionally, LANL efforts included the Advance Computing Laboratory Project (ACL), Grand Challenge Applications (GCA), Major Applications (MA) and Software R&D (SWRD). Regarding GCA and MA, the ACL provided computational and storage resources for five GCA and a few MA. Four of the GCAs, Numerical Tokamak, Global Ocean, Advanced Accelerator, and Quantum ChromoDynamics (QCD) have been long-term programs and are pace-setting efforts. MAs like the TeleMedicene and Multiphase Flow Studies are newer and are just now publishing their early results. Regarding SWRD, the ACL developed software tools, frameworks and libraries and is working on operating system software important to cluster style computing (Extreme Linux). This effort was recognized for the high quality of its products. LANL was involved in three projects that contribute to the development of the Advanced Computational Testing and Simulation (ACTS) Toolkit. LANL also participated in a national collaboratory pilot project - Diesel Combustion Collaboratory. All of these efforts involve integrated activities across multiple laboratories. The contribution of the research on these projects was of the highest quality. It is valued in the DOE2000 community, the ASCI community, and the scientific community at large. The ACTS component of the DOE2000 program was reviewed on January 5-6, 1999, and included the LANL projects. The four reviewers, all of whom were from other related programs outside the Office of Science (SC), were very favorably impressed with the quality and depth of all the projects initiated under ACTS, especially given the modest funding level of these projects. Additionally, a preliminary specification for a CCA and corresponding language interoperability was issued by the CCA working group. There were other notable examples of accomplishment. The Parallel Object-Oriented Methods and Applications (POOMA) FrameWork development continues, and over the past year, the POOMA framework was adopted by an additional number of application development groups. The next generation POOMA 2.0, that will replace the infrastructure of POOMA 1, was designed, constructed, and released on DOROM and the Internet.

Programmatic Performance: LANL's performance against this criterion was rated at Outstanding. LANL's applied mathematics research effort was consistently successful in meeting and exceeding long-term goals of developing analytical and numerical methods of fundamental value and wide applicability and shorter-term goals that involve collaborations with LANL and DOE disciplinary scientists on programs such as High Performance Computing and Communications Program (HPCC), ASCI, and SSI. During the past year, a day-to-day liaison with DOE on matters relating to the LANL applied mathematics effort was appointed. The liaison was responsive and conscientious in this new position, and the program is poised for even greater successes in the years ahead. LANL instituted an internal review process for evaluating existing applied mathematics projects and initiating support for new projects submitted by researchers across LANL. The planning appeared to be sound, complete, and consistent with the computational science community efforts appropriate milestones were met. The senior management at LANL was also responsive to the needs of the program and to the problems caused by the departure in FY98 of several of the computational fluid dynamists.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Relevance: LANL's performance against this criterion was rated at Outstanding. The LANL applied mathematics effort plays a unique role in the scientific life of the Laboratory and the nation. LANL consistently makes important contributions by developing enabling numerical algorithms and software for parallel and distributed computing platforms that are used by the national scientific and engineering communities, as well as by providing modeling and computing expertise to agency and national programs involving national security (ASCI, treaty verification), global climate modeling and simulation (HPCC, SSI), high-energy and nuclear physics, and materials science. LANL also interacts regularly with industrial partners in areas such as oil-reservoir modeling, and there are vibrant relationships with many outstanding research universities. Top university and industry researchers interact regularly with LANL's applied mathematicians through individual collaborations and longer-term visits sponsored by the Center for Nonlinear Studies. The GCAs are all partially supported by the appropriate science office within DOE/SC, and thus, are satisfying the DOE missions to provide for the Nation's needs in Energy Supply and Demand. These projects leverage (and provide leverage to) the ASCI and its "Cycles for Science." These projects produce world-class basic and applied research that is very relevant to the agency's missions by providing advanced computing tools that enable important applications.

Operation of Major Facilities: LANL's performance against this criterion was rated at Outstanding. The CIC DRC stated, "It is impossible to overstate the truly outstanding accomplishments of the Division in developing major new world-class research facilities for computing over the past year."
• ASCI Blue Mountain—"The new system . . . was successfully installed over the last year . . . The machine became operational on schedule . . . The system [is] arguably the fastest computer in the world. More importantly, the initial results on ASCI codes are very impressive."
• Strategic Computing Complex—"Even while CIC staff were actively working on installing Blue Mountain, planning was moving ahead on the next-generation ASCI platform . . . In order to meet the machine installation schedule, CIC had to devise an unusual, highly accelerated schedule for bidding, designing, and constructing the facility."
• Collaborative Visualization Facility—"CIC's new visualization laboratory is the largest such facility in the world. More importantly, it is a unique collaborative environment that allows entire teams of researchers to interactively explore and navigate through data . . . This choice of location has clearly promoted early use by the designers."

Notable Accomplishments/Recommendations: Notable accomplishments included the following. LANL, in collaboration with applied mathematicians at SUNY Stony Brook, accurately simulated various types of interfacial fluid instabilities that are crucial to applications such as nuclear weapons design, laser fusion, and combustion. LANL designed and implemented faster and more robust parallel algorithms for simulating large-scale transport phenomena. LANL derived and analyzed new classes of nonlinear partial differential equations for modeling the behavior of pulses transmitted along optical fibers. This work is at the forefront of efforts to design and deploy the next generation of optical fiber transmission networks and protocols. Working with experimentalists at Sandia National Laboratories in Albuquerque, LANL accurately simulated turbulent shear layers in several types of multiphase fluid flows. The installation of the Silicon Graphics, Inc., (SGI) Origin 2000 cluster (Nirvana Blue) and the ASCI Blue Mountain were outstanding accomplishments.

Notable Deficiencies/Recommendations: None.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Chemical Science and Technology (CST) Division

OVERALL DOE ADJECTIVAL RATING: Outstanding NUMERICAL SCORE: 94

Division CST	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	O/E	O/E	O	O/E	O/E
DOE	O	O	O	O	O

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Outstanding. LANL contributed to the Office of Biological and Environmental Research (BER) Natural and Accelerated Bioremediation Research (NABIR) program through excellent research on microbe-actinide interactions. In the area of Environmental Sciences, LANL significantly exceeded the standard of performance in the timely resolution of the non-mixed transuranic waste (TRU) issue with New Mexico Environment Department (NMED), which led to the first shipment of TRU waste to the Waste Isolation Pilot Plant (WIPP). LANL worked with DOE to devise a path forward to satisfy New Mexico (NM) State concerns. Initial identification of a non-mixed TRU waste stream was made on the basis of process knowledge. Additional planning of the scientific sampling required to persuade NMED that the waste stream was indeed non-mixed TRU waste was performed. LANL planning packaging of the waste was also essential in solving the thermal wattage limits of that particular waste stream. LANL was recognized by the customer through awards and letters of commendation. LANL's continued excellence in isotope geochemistry and geochronometry furthered the understanding of the record of the timing of recent geologic processes and of anthropogenic influences on geologic systems. Advances by LANL in quantifying tracers of fluid flow through fractured rock systems served as the basis for successful site-specific projects in the Environmental Management Science Program (EMSP). LANL was outstanding in their science for heavy element chemistry. For example, a June 1998 on-site reviewer stated that " Los Alamos is the preeminent world center for actinide chemistry." LANL also was selected for the highest number of awards (3) from the FY99 solicitations in carbon management and complex and collective phenomena.

Programmatic Performance: LANL's performance against this criterion was rated at Outstanding. The WIPP TRU task was of high importance to the sponsor and CST treated it as such. Priority was placed on getting it done. Considerable effort went into working with other portions of LANL to complete critical path work expeditiously. CST managers and staff exhibited strong commitment to completing this project on time with a very high quality product.

Relevance: LANL's performance against this criterion was rated at Outstanding. The WIPP is the cornerstone for TRU waste management in the DOE complex. LANL's efforts were critical to the opening of WIPP. LANL supported the receipt of the first waste at the WIPP. Without the success achieved here, the opening of WIPP could have easily been delayed a year or more. The shipping of non-mixed TRU waste to WIPP fulfilled a national need and agency mission.

Operation of Major Facilities: LANL's performance against this criterion was rated at Outstanding. The CST DRC stated, "The CST Division manages a large, diverse group of aging research and support facilities . . . Included in CST space are three nuclear facilities that support the TRU [Transuranic] Program, and one candidate nuclear facility . . . Within constraints of funding . . . , the DRC believes that the CST Division conducts an outstanding program to satisfy user needs, maintain a safe working environment, and sustain clean support facilities, equipment, and systems."

Notable Accomplishments/Recommendations: A notable accomplishment was the sampling plan for non-mixed TRU waste in support of the WIPP startup and shipment of waste.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Notable Deficiencies/Recommendations: None.

Dynamic Experimentation (DX) Division

OVERALL DOE ADJECTIVAL RATING: Excellent NUMERICAL SCORE: 87

Division DX	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	O/E	O/E	O	O	O/E
DOE	E	G	O	O	E

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Excellent. The dynamic experiments program at LANL is the core of LANL's stockpile stewardship experimental work. This included, among other things, the hydro program, which uses Dual-Axis Radiographic Hydrotest/Hydrodynamics Testing facility (DARHT), Pulsed High-energy Radiographic Machine Emitting X-rays (PHERMEX) and other facilities at LANL. DOE believed LANL underachieved on this program. Regarding NTS & Subcritical Experiments, data from the subcritical experiments added to the understanding of the properties of plutonium. Cimarron was unprecedented in its diagnostic complexity as a subcritical experiment. Cimarron added to the understanding of surface phenomenology as well as contributed to the development of diagnostics that will be used on future subcritical experiments.

Programmatic Performance: LANL's performance against this criterion was rated at Good. Regarding the dynamic experiments program at LANL, DOE was displeased with LANL's performance and rated it at Marginal. Specifically, LANL management failed to integrate the planning, scheduling and implementation of this program among the various applicable laboratory departments, with Lawrence Livermore National Laboratory (LLNL), and between basic science and directed stockpile work. Further, LANL essentially ignored DOE requests that this situation be improved and failed to provide good planning documents to DOE. Management attention and corrective action is required. Regarding NTS & Subcritical Experiments, Cimarron was a complex experiment. There were extensions of the schedule, some due to technical and operational difficulties and at least one due to a safety problem. The safety deficiency was dealt with swiftly and suitably, but it did involve a shutdown of some of the operations, with a subsequent impact on the schedule. When technical difficulties were encountered just before the planned execution, LANL implemented a work-around that allowed getting the data without compromising the remainder of the experiment. In spite of these difficulties, Cimarron was executed before the end of the calendar year as promised. Cimarron and the Ranchito experiments at Big Explosive Experimental Facility (BEEF) were managed safely with excellent data return. LANL's performance regarding the multi-divisional DP Pit Production Readiness effort was rated at Marginal. See the detailed discussion of this program contained in the NMT Division Evaluation.

Relevance: LANL's performance against this criterion was rated at Outstanding. The dynamic experiments program at LANL is the core of LANL's stockpile stewardship experimental work. Regarding NTS & Subcritical Experiments, the work is essential to certifying weapons in the stockpile and in gathering data which will be used in the ASCI codes. Ranchito pulsed-power experiments at BEEF are being used to develop experiment systems for future subcritical experiments.

Operation of Major Facilities: As part of its review, the DRC "praised the Division's construction management efforts on the DARHT facility. The Committee was impressed with the progress being made towards a first test with DARHT Axis I. This achievement is remarkable given the complexity of the science [and] the technical and safety requirements for the facility, . . . DX management and the DARHT team deserve high praise for this achievement. "One technological advance associated with the DARHT program . . . is a development that will drive the state-of-the-art in dynamic experiments. The DARHT project scope was increased to commit to the

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

second-axis beamline with multi-pulsed capability. The project is proceeding very well, on cost and on schedule. The DRC commends the DARHT team on its excellent progress. "The Committee is pleased to see DX management is taking advantage of prior experience on LIAs [linear induction accelerators]."

Notable Accomplishments/Recommendations: A notable accomplishment was the successful execution of the Cimarron experiment with 100% data return.

Notable Deficiencies/Recommendations: LANL failed to integrate the planning, scheduling, and implementation of the dynamic experiments program. Management attention and corrective action is required.

Department Of Energy FY 1999 Appraisal Of
The University Of California And Los Alamos National Laboratory

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Earth and Environmental Sciences (EES) Division

OVERALL DOE ADJECTIVAL RATING: Outstanding NUMERICAL SCORE: 94

Division EES	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	O/E	O/E	O	O	O/E
DOE	O	O	O	O	O

DOE narrative evaluation of LANL's performance:

Quality of Science: Although some variation among the various projects was noted, LANL's overall performance against this criterion was rated at Outstanding. LANL's contributions to global climate change research included management of an Atmospheric Radiation Measurements (ARM) site and the theoretical development and implementation of an ocean General Circulation Model (GCM). The LANL GCM is now the dominant code for ocean models in the U.S. The rock physics research group had one of its seminal results featured in Physics Today. The quality of the science by LANL for the Yucca Mountain Project was generally of high quality. A specific example of a challenging task done well was the Busted Butte experiment. The meaning of "quality" to the Yucca Mountain Project has a very special meaning, and in general the LANL efforts at meeting these quality requirements were excellent.

Programmatic Performance: LANL's performance against this criterion was rated at Outstanding. In order to accomplish quality science, the planning and performance must be commensurate. This was the case for LANL, although there could be improvements in schedule and cost reporting and control.

Relevance: LANL's performance against this criterion was rated at Outstanding. The relevance of the work at Yucca Mountain to the national needs and agency mission is Outstanding. Geosciences research at LANL continued to provide a strong foundation underpinning technologies that are essential in DOE's technology programs in the Offices of Fossil Energy, Environmental Management, and Geothermal Energy, and particularly, in the oil and gas industry. The geophysics research group completed a major collaborative study with industry and the Office of Fossil Energy under the Advanced Computational Initiative (ACTI). Both ARM and the Climate Prediction programs are addressing the uncertainty in predicting climate change that addresses a major DOE mission and national issue.

Operation of Major Facilities: LANL's performance against this criterion was rated at Outstanding. LANL did an exceptional job in developing and operating the Pacific ARM site that is providing critical new information for improving the physics of clouds and radiation in climate models. The Busted Butte experiment was an example of LANL's specific conduct of a major research facility. In addition, the role performed by LANL in the Test Coordination Office (TCO) was exemplary in the Yucca Mountain project of a challenging job done well.

Notable Accomplishments/Recommendations: The ongoing role of the TCO in coordinating the site characterization tests at Yucca Mountain and the TCO role in supporting tours of the Yucca Mountain Project site were exemplary. The development, design, conduct, and analyses of the Busted Butte experiment were also noteworthy.

Notable Deficiencies/Recommendations: The quality assurance aspects of the Yucca Mountain Project were challenging, and LANL put forth substantial effort and did well, but some additional effort could make this performance outstanding. Even though the scientific aspects of the Busted Butte experiment were notable, there could be some improvement in the management aspects of cost and schedule control and reporting.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Engineering Sciences and Applications (ESA) Division

OVERALL DOE ADJECTIVAL RATING: Excellent NUMERICAL SCORE: 85

Division ESA	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	O	O/E	O	O/E	O/E
DOE	E	G	E	O	E

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Excellent. LANL did an excellent job of meeting Enhanced Surveillance Program (ESP) deliverables and milestones during the appraisal period. Of particular note was the work that is being accomplished in support of the Phase 6.2 and 6.2A studies for the W76 and the W80. Their work, in providing lifetime assessments for critical components, is of significant importance to those programs and in determining what components will need to be addressed by those life extension programs. LANL provided high quality engineering support in assessment and resolution of natural phenomena (wind, seismic) design and safety issues. ESA personnel are "up to speed" on state-of-the-art approaches and methods and apply these to resolution of issues.

Programmatic Performance: LANL's performance against this criterion was rated at Good. Areas of positive performance included the following. LANL did an excellent job of meeting milestones and deliverables for the development of advanced diagnostic instrumentation for Joint Test Assemblies (JTA). LANL container support remained excellent. LANL's performance in support of the Quality Evaluation Tracking (QET) program met all expectations. LANL did an outstanding job in completing the testing of pits, detonators and valves. ESA-WE did an outstanding job in updating and issuing the appropriate RS and JTA drawings in support of the surveillance program. Regarding natural phenomena design and safety issues, ESA responded in a timely and effective manner to address issues at LANL and also provided critical support in the upgrading of authorization basis documentation at Pantex. The performance and planning by LANL for the diagnostic research was outstanding. The collaboration with Japan continued to move forward with great success. Performance expectations were not met in the following area(s). In conducting the DOE-Japan Atomic Energy Research Institute (JAERI) Collaborative Program for the last 13 years, LANL has been very successful in meeting all the milestones and doing so within cost and on schedule. However, late this summer, LANL [Tritium Science and Engineering (TSE) Group Management] indicated to DOE that the costs for operating the Tritium Systems Test Assembly (TSTA) and conducting the Collaborative Program would increase by a factor of two and one-half times over the cost of conducting the same program in FY99. DOE's Office of Fusion Energy Sciences (OFES) has indicated its displeasure with being told less than six weeks before the beginning of the new fiscal year of the need to quadruple (because the JAERI funding contribution is fixed by international agreement) funding of this facility to accomplish the Collaborative Program. Interactions with the TSE Group Management have not yet resolved DOE's serious concerns on the management approach which, DOE believes, is not conducive to efficient and cost-effective management and does not appear to implement Integrated Safety Management principles effectively. Additionally, LANL's performance regarding the multi-divisional DP Pit Production Readiness effort was rated at Marginal. See the detailed discussion of this program contained in the NMT Division evaluation. Finally, DOE was dissatisfied with the lack of attention Significant Finding Investigation (SFI's) received at LANL. This lack of attention extends to LANL organizations outside of ESA-WE. Lack of funding precluded LANL from working on the valve backlog and some pit shelf-life program requirements.

Relevance: LANL's performance against this criterion was rated at Excellent. LANL's support of the Weapons Evaluation Program is vital to the nation's ability to assess the reliability of the nuclear weapons stockpile. LANL's ESP tasks are focused on two main ESP objectives; providing meaningful lifetime assessments for critical components (materials) and providing enhanced tools for the Core Surveillance Program. Many of LANL's tasks are focused on understanding the mechanisms of aging for a myriad of materials contained in the Nuclear

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Explosive Package. The numbers of tasks focused on aging are numerous and include the aging of pits, canned sub-assemblies (CSAs), gas transfer systems, high explosives, and polymeric materials. Many of the tasks focused on aging go hand-in-hand with the development of techniques that will be implemented in the Core Surveillance Program. These tasks are also numerous, but include the implementation of new high explosive tests at Pantex, the implementation of the Horizontal Air Bearing at Pantex, and the implementation of advanced CSA diagnostic techniques at Y12. Additionally, LANL has established itself as the leader in fusion fuel processing and safe handling technology for the fusion energy program worldwide. In developing and demonstrating the fuel cycle technology for the next generation of fusion devices, LANL established an important database, which is of critical importance in helping fusion reach its full environmental and safety potential. Since 1987, (TSTA has been jointly operated and funded by DOE and JAERI. This Collaborative Program has been very successful in developing the necessary technical information to design and build the tritium handling system for the next step device for fusion energy research. However, the multi-divisional DP Pit Production Readiness effort was rated at Marginal. See the detailed discussion of this program contained in the NMT Division evaluation.

Operation of Major Facilities: LANL's performance against this criterion was rated at Outstanding. The Tritium Systems Test Assembly (TSTA) is considered one of the preeminent fusion tritium facilities in the world. It is the only facility that can fully duplicate all the elements of the fusion fuel cycle. Because of its ability to test and handle large quantities and different forms of tritium, several other fusion technology development programs (e.g., tritium-plasma materials interaction and pellet fueling) continue to use TSTA experimental capabilities. In addition, TSTA has an excellent safety record during its many years of operation.

Notable Accomplishments/Recommendations: LANL was instrumental in supporting the development of the Instrumented High Fidelity Joint Test Assembly for the Core Surveillance Program. Their continued efforts will be required to bring the DOE JTA Program into the 21st Century.

Notable Deficiencies/Recommendations: Regarding the DOE-JAERI Collaborative Program, LANL should put into place a management team and approach fully suited to a SC supported nuclear facility. DOE/OFES was displeased not only that there will be a quadrupling of costs to DOE for the TSTA, but also that LANL broke this news less than six weeks before the beginning of the new fiscal year, causing serious funding difficulties. Additionally, DOE was dissatisfied with the lack of attention SFI's receive at LANL. Lack of funding precluded LANL from working on the valve backlog and some pit shelf-life program requirements. Finally, LANL's performance regarding the multi-divisional DP Pit Production Readiness effort was rated at Marginal. See the detailed discussion of this program contained in the NMT Division evaluation.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Environmental, Safety, and Health (ESH) Division

OVERALL DOE ADJECTIVAL RATING: Excellent NUMERICAL SCORE: 85

Division ESH	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	E	E/G	O/E	O/E	O/E
DOE	E	E	O	N/A	E

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Excellent. The DRC observed that some projects were "excellent to outstanding. Other projects were "useful, but could not be considered as new additions to science and/or technology . . . Two-thirds of the projects fit into the first category of excellent to outstanding . . . Five of the projects . . . received grades of Outstanding in all four UC criteria." Project specific judgments were as follows.

• Organic vapor air-purifying respirator cartridges—"This project has also won several awards in recognition of its relevance to the practice of industrial hygiene."

• Pressure effects and deformation of waste containers—"The project is outstanding in its quality of science and technology, having solved problems that industry has not been able to solve effectively . . . This project has won many awards and has resulted in peer-reviewed papers and publications that have attracted citations from industry and other users."

• Hydrogeologic characterization of the Pajarito Plateau—"This is an outstanding project in all aspects of science and technology . . . The plan is well developed with modeling and experimentation performed in such a way that experiments are step wise and guided by knowledge . . . Three wells have been completed to date and already significant data has been obtained which has identified nitrates from sewage in the groundwater as well as tritium and high explosives in some of the groundwater."

• Concerns—" Although there is an excellent tracking system started, there needs to be a complete 'cradle to grave' tracking system for materials throughout the laboratory."

Programmatic Performance: LANL's performance against this criterion was rated at Excellent. The "DRC recommends that research avenues be broadened by making funding available for . . . more basic research in health and safety." The Quality Management Group "received a New Mexico Quality Award for their overall operation within a quality plan." Occupational Medicine "received independent certification of their program . . . The DRC is concerned that some of the ESH S&T developments have not been effectively implemented at LANL."

• Science and Technology Strategic Plan—"The Division has made substantial progress in developing a strategic plan for science and technology . . . ESH Division must have a viable S&T research program in order to achieve and maintain 'best-in-class' status for LANL's ES&H [environment, safety, and health] programs . . . The DRC recommends that LANL develop a Laboratory-wide strategic plan for ES&H science and technology . . . It should be clear in the Division's plan how each strategy and proposed activity . . . relates to the Laboratory's mission and strategic plan . . . The Division's S&T strategic plan should be . . . a component of the Division's overall strategic plan . . . The three strategic goals are reasonable, but quite general and modest . . . The strategies described under each goal identify processes or resources."

• Site-Wide Environmental Impact Statement (SWEIS) Yearbook—"The SWEIS Yearbook is an excellent example of cultural thinking beyond compliance."

Relevance: LANL's performance against this criterion was rated at Outstanding. As reported by the DRC "S&T activities of the ESH Division have resulted in enhanced worker safety and in some cases substantial cost savings.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

The Laboratory has continued to improve its outreach to surrounding communities with research directed to answer community questions and concerns."

Operation of Major Facilities: N/A

Notable Accomplishments/Recommendations: None.

Notable Deficiencies/Recommendations: None.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Los Alamos Neutron Science Center (LANSCE) Division

OVERALL DOE ADJECTIVAL RATING: Good NUMERICAL SCORE: 71

Division LANSCE	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	O/E	O/E	O	O/E	E*
DOE	G	G	G	G	G

*Overall Score was lowered by UC for reasons related to the LANSCE stand-down, reliability, and programmatic performance.

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Good. The FY99 LANSCE DP Program was a disappointment. There was a LANSCE safety stand-down from February until June 1999. The research work in the areas of weapons materials science, high-explosives science, weapons nuclear data, and weapons design physics was virtually non-existent. Important work was accomplished in the area of Proton Radiography - the firing of a first-of-its-kind implosion experiment, "Billi G." The Short Pulse Spallation Source (SPSS) Accelerator Enhancement experienced several significant technical issues that may jeopardize its ability to complete on schedule and within scope and budget. Regarding the Isotope Production Facility (IPF) described further below, the technical expertise residing at LANSCE were focused to design and construct the new 100 MeV IPF.

Programmatic Performance: LANL's performance against this criterion was rated at Good. LANSCE management applied limited resources to the development of IPF work packages, resulting in additional revisions and resources and initially delaying completion of several work packages. The application of the agreed-upon LANSCE resources appears to have been corrected. The protein crystallography station at LANSCE has fallen behind schedule. Regarding the SPSS project, it was delayed by the LANSCE safety stand-down. Additionally, an unresolved safety issue associated with the ventilation to the Lujan target may delay the ability to produce beam to the Lujan target. The LANL SPSS Program Manager failed to inform the DOE Program Managers (LAAO & HQ) on key LANSCE issues that have affected the schedule, cost, and scope of the SPSS upgrade. The manpower available to support work on the Ion Source Test Stand (ISTS) has been a problem. LANSCE does not have a master resource loaded management plan that includes all activities at the Lujan Center and has not demonstrated an integrated approach to resolving this issue. The resolution of the emittance issue in the Ion Source requires additional research and testing on the ISTS. Control of the beam emittance growth solution is expected to delay the new source installation approximately six months. The lack of a clear understanding, at this late stage in the project, makes the ability to meet cost, schedule, and scope questionable. The resolution of the stability and beam loss in the Proton Storage Ring (PSR) requires additional research. Dedicated production beam time to the Lujan target is necessary to research beam loss. The planned LANSCE shutdown from March - June 2000 may preclude beam time if the technical issues are not resolved. Again, this could be further complicated if the ventilation safety issues are not timely resolved. Regarding the LANSCE DP program, DOE's concerns remain the same as indicated in last year's evaluation. Specifically, it has been more than six months that a request for a Fact Sheet on LANSCE was made by DP-10. Repeated reminders to LANSCE management have been unsuccessful so far. Further, one-page progress reports were not provided to the DOE LANSCE DP Program Manager. Repeated reminders were mostly ignored. Finally, LANSCE management relied heavily on one individual to respond to the DOE LANSCE DP Program Manager on LANSCE issues. At the same time this individual was pulled in several different directions. For the past two years, DOE has requested LANSCE management to improve this situation. There still is no improvement. The management of the research program and the high field magnets has been extremely good; however, the management of the LANSCE has not been as good. The LANL matrix management of engineering, etc., appears to impede the ability to get work done efficiently -- too many individuals are answering to too many bosses with the result that no single project makes progress expeditiously.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Relevance: LANL's performance against this criterion was rated at Good. LANSCE facilities, in conjunction with the IPF, assists the Office of Isotope Programs with the capability to provide year-round availability of short-lived radioisotopes needed for vital medical research, as well as the routine production of isotopes for medicine and industry. SPSS is to significantly upgrade the capabilities of the LANSCE. The goals of the SPSS are: i) to increase the LANSCE neutron source intensity by delivering more proton beam power to the neutron production target, and ii) to increase the technical capabilities of LANSCE by constructing five additional neutron scattering spectrometers. In FY99, SPSS's Accelerator Enhancement contribution to national needs and agency mission was minimal as discussed previously. Additionally, LANSCE is a critical component of the Stockpile Stewardship and Management Program. In FY99, LANSCE's contribution to national needs and agency mission was very minimal as discussed previously.

Operation of Major Facilities: LANL's performance against this criterion was rated at Good. For several months in FY99, Technical Area 53 was placed in stand-down in response to several relatively minor safety incidents. The estimated cost in lost productivity was $6 million. Extensive training and procedure reviews were conducted during the shutdown. As discussed in the previous criteria, this stand-down affected LANSCE's ability to serve the Science and Technology missions it was intended to. This was necessary, but DOE expects LANL management to be alert to such issues so that programs are not interrupted for such a long period. LANSCE is a major national asset that must continue to improve its facilities and operations. LANL should understand that more stand-downs will cause the loss of all credibility with the user community. In the past few weeks, more safety issues have been raised at the Lujan Center, e.g., the release of radioactive dust coming from a radioactive liquid waste drain has contaminated the Lujan experimental area. This will result in further delays of research in the Lujan Center. The contributions of the LANSCE to the design of the IPF greatly contributed to the completion of the facility design on schedule.

Notable Accomplishments/Recommendations: Notable accomplishments included the following. The firing of the Proton Radiography implosion experiment, Billi G, was a notable accomplishment. Although a late start and coordination difficulties challenged early IPF milestones, subsequent efforts resulted in the completion of the facility design on schedule. Regarding the SPSS effort, the maximum proton charge stored in the PSR was well in excess of the required charge.

Notable Deficiencies/Recommendations: Notable deficiencies included the following. For two years in a row, DOE has recommended that LANSCE management provide greatly needed assistance to LANL's LANSCE DP Program Manager, but to no avail. Any request from the DOE LANSCE DP Program Manager to the LANL LANSCE Program Manager is delayed indefinitely and most of the time several reminders have to be made. Regarding SPSS, LANSCE management should work expeditiously to resolve the ventilation safety issue associated with the Lujan target and the recent contamination issue in the Lujan Center to ensure schedules are not further impacted. LANSCE management should develop a master resource loaded management plan that includes all activities at the Lujan Center. Further, LANSCE management should have better communication with the DOE LAAO and HQ LANSCE SPSS Program Managers. The Office of Basic Energy Sciences (BES) has concerns about the laboratory's performance in the technical development, operation, and management of the Los Alamos Neutron Science Center and the linac part of the Spallation Neutron Source project.

Department Of Energy FY 1999 Appraisal Of
The University Of California And Los Alamos National Laboratory

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Life Sciences (LS) Division

OVERALL DOE ADJECTIVAL RATING: Outstanding NUMERICAL SCORE: 92

Division LS	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	O/E	O/E	O	N/A	O/E
DOE	O	O	E	N/A	O

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Outstanding. LANL played a key and outstanding role as the quality coordinator for the DOE Joint Genome Institute's (JGI) Production Sequencing Facility. LANL also played a leading role in developing strategies that, hopefully, will lead to high throughput approach for determining protein structure. LANL's research in structural biology was considered outstanding, with several high-profile publications over the past year. Major publications have appeared on calmodulin and related structures that received high international recognition.

Programmatic Performance: LANL's performance against this criterion was rated at Outstanding. LANL did an outstanding job planning its efforts and meeting its goals as part of the JGI. LANL exceeded its sequencing goals for FY99. LANL did an outstanding job in its JGI management role.

Relevance: LANL's performance against this criterion was rated at Excellent. LANL's efforts in genomics, as part of the JGI, and in structural genomics are highly relevant to both national and DOE needs, goals in the human genome project, and in structural biology.

Operation of Major Facilities: N/A

Notable Accomplishments/Recommendations: LANL exceeded its sequencing goals for FY99. LANL also implemented a robust quality assessment system to ensure that the JGI sequence data is of the highest quality as part of the international human genome project.

Notable Deficiencies/Recommendations: None.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Materials Science And Technology (MST) Division

OVERALL DOE ADJECTIVAL RATING: Outstanding NUMERICAL SCORE: 91

Division MST	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	O	O	O	O/E	O
DOE	O	E	O	O	O

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Outstanding. The quality of science associated with the National High Magnetic Field Laboratory-Pulsed Field Facility (MST-NHMFL) was extremely high and led to publications in prestigious journals. World class science is being accomplished here. Materials development work was world class. In the Hydrogen Program, LANL supported two fuel cell development projects. They were well received by an outside peer review group. In Polymer Electrolytic Membrane Fuel Cell (PEMFC) technology, LANL made significant contributions to overcoming the technical barriers to automotive fuel cell development with sustained superior performance over the past 10 years. In the ESP, LANL did an excellent job in support of the Phase 6.2 and 6.2A studies for the W76 and the W80. The Superconductivity Technology Center was judged as outstanding. LANL's weapons Chemistry and Materials Science (C&Ms) was exceptional. Significant scientific achievements were made under the Metal and Ceramic Sciences program at LANL. The research programs at LANL supported by the Condensed Matter Physics and Materials Chemistry programs were outstanding. LANL demonstrated continued excellence in isotope geochemistry and geochronometry. Advances by LANL in quantifying tracers of fluid flow through fractured rock systems served as the basis for successful site-specific projects in the EMSP. LANL has been recognized both nationally and internationally for its expertise in the area of tritium technology. In the last several years, LANL developed and demonstrated major improvements in fuel cleanup technology for future fusion facilities. This new technology, known as the Palladium Membrane Reactor (PMR), has been substantially better from a cost, safety, and ease of operation standpoint than anything else available.

Programmatic Performance: LANL's performance against this criterion was rated at Excellent. The NHMFL met and exceeded all of its goals. Materials development was effectively managed. LANL reorganized the condensed matter physics and materials chemistry projects into three larger, more focused research efforts. Regarding the Energy Technology Programs - Hydrogen R&D, LANL demonstrated good programmatic performance and planning through the development of a technology roadmap for the two fuel cell technologies. Regarding the DOE Office of Energy Efficiency and Renewable Energy (EE) Transportation Fuel Cell Program, LANL worked with DOE to identify milestones that were consistent with system level technical targets. The projects received high marks at the annual Merit Review and Peer Evaluation. Regarding ESP, LANL did an excellent job of meeting milestones and deliverables for the development of advanced diagnostic instrumentation for Joint Test Assemblies (JTA) for the Nuclear Explosive Package during actual flight environments. Management of the Superconductivity Technology Center was outstanding. LANL management of the Metal and Ceramic Sciences program deserved much credit for the superior interface of the program with industry and DP. In the management of the NHMFL, two separate scores are provided for the reasons described below.

- During the reporting period, LANL leadership implemented a new structure for this Center, which gives it an identity with LANL and improves its management structure. The new Center status had been requested for several years and the contracting institution was pleased that it was finally implemented. In addition, LANL appointed an outstanding new director. The contracting institution applauds this new hire and appreciates the leadership skills that he brings to this effort. The programmatic performance and planning by the NHMFL in Los Alamos was of the highest caliber. They were proactive in establishing a clear vision for the future of this facility.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

- On the other hand, there is some need to provide better communications among LANL leadership , the Director of the NHMFL at Los Alamos, and the Director of the NHMFL. Many of these concerns deal with changes in "taxing" and billing procedures (issue not limited to MST management) that impact heavily on the NHMFL's Los Alamos budget and ability to deliver its program. LANL needs to provide better and more complete planning for the future when the work-for-others contract is established and there needs to be more advanced dialogue when changes are required. The interface among LANL management, the NHMFL leadership, and the contracting institution, FSU, needs to be improved.

Therefore, the rating of the NHMFL staff at LANL and the Director of the NHMFL at Los Alamos was Excellent, however, the rating of the interface to the leadership of LANL was Marginal. LANL's C&Ms management was responsive in providing the DP C&Ms Program Manager with needed information, e.g., technical presentations, progress reports. However, there are some areas that need improvement. For example, input to the Energy Materials Coordinating Committee (EMaCC) in the Office of Science on Materials Research was delayed considerably and technical information/results/concerns on C&Ms program was not provided to the DP Program Manager on a regular basis. (Once a month would be good to start with). LANL's performance regarding the multi-divisional DP Pit Production Readiness effort was rated at Marginal. See the detailed discussion of this program contained in the NMT Division evaluation.

Relevance: LANL's performance against this criterion was rated at Outstanding. The hydrogen-based fuel cell will have significant impacts on climate change and energy security, both important agency and national interests. The technologies under development by LANL, if successful, will significantly impact the market penetration of Polymer Electrolytic Membrane (PEM) fuel cells. Regarding support to the Office of Industrial Technologies, all projects have industrial partners, and therefore, contribute to the Nation's industrial strength. LANL's ESP tasks are focused on providing meaningful lifetime assessments for critical components (materials) and providing enhanced tools for the Core Surveillance Program. The NHMFL provides the only high field laboratory in the Western Hemisphere. The MST C&Ms research work addresses the three focus areas for the C&Ms competency relevant to national needs and agency mission, namely, as-built materials characterization and performance, materials aging knowledge, and materials synthesis and processing knowledge. The on-site formal peer review of the Basic Energy Sciences Metal and Ceramic Sciences program at LANL found that the program was very well coupled and interfaced with important industrial needs and with co-sited activities funded by the DP. LANL's performance regarding the multi-divisional DP Pit Production Readiness effort was rated at Marginal. See the detailed discussion of this program contained in the NMT Division evaluation.

Operation of Major Facilities: LANL's performance against this criterion was rated at Outstanding. LANL has done an excellent job of developing and maintaining the research facilities for PEM fuel cell development. Regarding NHMFL, the new management and staff for the Center are outstanding. The relationships between the other aspects of the laboratory have improved and the cooperation between NHMFL sites has grown significantly during the evaluation period. The NHMFL-Pulsed Field Facility staff members have also made significant enhancements to the facility and were extremely proactive in anticipating new requirements and expanding the science opportunities through innovative instrument development. Other developments included the 30 Tesla pulsed field magnet for LANSCE and the 100 Tesla pulsed field magnet. Both of these construction projects made good progress in the past year. In addition, the users of the Laboratory expressed a great deal of satisfaction with how the facility was managed.

Notable Accomplishments/Recommendations: The use of stainless steel for flow fields and the radial design for small battery replacement fuel cells were excellent accomplishments for the LANL fuel cell program. LANL's fuel cell group received the annual Laboratory Fuel Cell R&D Award in June for their contributions to fuel cell anode development. LANL was instrumental in supporting the development of the Instrumented High Fidelity Joint Test Assembly for the Core Surveillance Program. At DOE's Superconductivity Program Annual Peer Review, LANL scored the highest in two critical program areas: Advanced Wire Research and System Development. The commissioning of the 60 Tesla long-pulse magnet and the opening of this new system to the user program was a most notable accomplishment. The growth in the user program was also noteworthy. New science emerged during this period. A few notable examples included the Fermi surface studies across the alloy system, (Ce,La)B6, a highly correlated electron system, the demonstration of new capabilities to measure the specific heat in pulsed

magnetic fields for the first time, and the discovery of a possibly new correlated electron state in low carrier density systems, i.e., rare doped CaB6. Notable accomplishments in the field of nuclear weapons materials included excellent progress made in understanding the phenomena of aging in materials, experimentally obtained detailed kinetic essential for extensive modeling of uranium hydriding processes initiated at inhomogeneities on uranium surfaces, and demonstrated for the first time that hydriding initiates at defects such as grain boundaries and impurities that facilitate the dissociation of dihydrogen to hydrogen atoms.

Notable Deficiencies/Recommendations: As discussed above, there needs to be more advanced planning and lead time for budgetary areas that impact the NHMFL. The recommendation is that there must be greater coordination between LANL leadership and the NHMFL concerning all budget changes and that the impact of such changes on the capabilities of the NHMFL to deliver the required user support must be discussed before they are implemented. Additionally, it is recommended that C&Ms staff and management make an effort to give seminars on important technical results/work to DOE Headquarters DP-10 and DP-20 staff and management. Finally, LANL's performance regarding the multi-divisional DP Pit Production Readiness effort was rated at Marginal. See the detailed discussion of this program contained in the NMT Division evaluation.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Nonproliferation and International Security (NIS)

OVERALL DOE ADJECTIVAL RATING: Outstanding NUMERICAL SCORE: 90

Division NIS	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	O	O	O	O	O
DOE	O	E	O	G	O

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Outstanding. The quality of science at LANL/NIS is second to none. Examples are the Array of Low-Energy X-ray Imaging Sensors (ALEXIS)/Blackbeard and Fast On-orbit Recording of Transient Events (FORTE') satellite systems. LANL has an exclusive edge in this type of science and the ripples of new related applications continue. The first really new kind of low-light level imaging was introduced in Remote Ultralow Light Level Imaging (RULLI). This seminal work continues to spin-off novel applications whose value is yet to be fully appreciated. The spectral work being done at NIS is also world class. Partnering with other national laboratories in developing Multispectral Thermal Imager (MTI), Chemical Analysis by Laser Interrogation of Proliferant Effluents (CALIOPE) and Hyperspectral Infrared Imaging System (HIRIS) will bring important nonproliferation and verification tools to our national security. The Nuclear Material Protection, Control and Accounting (MPC&A) program requires a great deal of applied scientific and technical expertise in (1) the assessment of the risk posed by nuclear material in forms other than weapons, (2) the design and construction of MPC&A upgrades to counter the risk of proliferation, and (3) the implementation of procedures for proper nuclear material control and accounting. LANL's performance in these areas was consistently up to the standard required by the program. DOE MPC&A Program management was particularly impressed by the technical expertise demonstrated by the Safeguards Systems Group (NIS-5) in assisting with the pilot project for nuclear material consolidation at the Luch facility in Podolsk, Russia. Regarding the FORTE' program, the level of science, technology, and engineering that went into the design, fabrication, and launch preparation seemed clearly outstanding to external observers and reviewers. This continues to be a significant project based on flawless orbital operations and endless data retrieval.

Programmatic Performance: LANL's performance against this criterion was rated at Excellent. Areas of positive performance included the following. NIS exhibited excellent qualities in proactive program planning and proposal submissions. Life cycle plans were clear, explicit, and executable, both in costs and scheduling. LANL's programmatic performance and planning under the MPC&A program have, in general, improved significantly during the period under evaluation. There were a few exceptions to this general improvement. For example, one LANL staff member had difficulty in organizing and leading a portion of one of the MPC&A projects and was subsequently replaced by another, more experienced LANL staff member who performed quite well. However, DOE MPC&A program management was pleased with LANL's overall improvement in managing the assigned work scope within budget constraints. One of the MPC&A projects managed by LANL achieved excellent results with their Russian counterparts, while nevertheless remaining aligned with MPC&A program policy. This required a good deal of effort on the part of the LANL project team. During the period under evaluation, there were no cost overruns on MPC&A projects managed by LANL. This is a marked improvement over past performance. Also, LANL management consistently acted quickly to resolve problems brought to their attention by program management at DOE HQ. In one instance, a LANL-led project team was able to change their project's approach from the high-tech, long-term solution favored by their Russian counterparts to a more practical, phased, lower-tech solution that fit well into the current Russian environment. In so doing, LANL staff demonstrated creative thinking and a willingness to work toward solutions that are consistent with Program policy. While there is still some fundamental knowledge lacking related to budget and funds, there was considerable improvement in LANL's project management under the MPC&A program. Regarding the FORTE' project, overall planning and management was excellent. Data retrieval was excellent and beyond expectations.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Relevance: LANL's performance against this criterion was rated at Outstanding. NIS did an outstanding job in following evolving national issues and DOE's mission areas with the foresight to anticipate technical solutions for national security needs. The FORTE' project was compatible with DOD missions.

Operation of Major Facilities: LANL's performance against this criterion was rated at Good. NIS's ability to produce world class sensor systems and methodologies reflect a high performance in development and operation of research facilities. However, from August 1998 to April 1999, the TA-18 Facility, which handles special nuclear materials and is involved in nuclear detection development, criticality safety experiments, and other nuclear related functions, was placed in a stand-down following a criticality safety infraction. The estimated cost in lost productivity was $6 million. Delays in completion of the resumption effort had substantial effects on the ability for this facility to support important program requirements. Recent efforts on hazards analysis have demonstrated improved focus and have the potential to improve facility availability and the cost of operations in coming years.

Notable Accomplishments/Recommendations: Notable accomplishments were performance of world class, state-of-the-art technology development in remote sensing: RULLI, HIRIS, CALIOPE and MTI, no cost overruns on MPC&A projects, and quick LANL management response to DOE MPC&A program management. The exceptional and successful operations in orbit of the FORTE' project (two plus years of operations with no end in sight) was an outstanding accomplishment.

Notable Deficiencies/Recommendations: Regarding the MPC&A program, improvements could still be made relative to overall management within specified requirements, such as better work plan development and reporting. Significant productivity loss was experienced as a result of the TA-18 Facility stand down.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Nuclear Materials Technology (NMT) Division

OVERALL DOE ADJECTIVAL RATING: Good NUMERICAL SCORE: 78

Division NMT	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	E	O/E	O	O/E	O/E
DOE	G	M	E	E	G

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Good. Process Development and applications to DOE priorities were a strength over this period. The Radioactive Sealed Source Program task called for processing sealed sources to separate the Pu from the Be. The sponsor also wanted new processes investigated as an alternative to the existing wet chemical process. It was clear to DOE that NMT was not interested in looking for alternatives that did not support current methods.

Programmatic Performance: LANL's performance against this criterion was rated at Marginal. From July 1, 1998 to June 30, 1999, LANL's performance in support of the Pit Production Readiness Program was marginal. LANL was incapable of meeting major performance goals within the program primarily because the organization was fractured, resulting in no one individual being effectively in charge of the program to assure focus and resolution of issues within a matrixed and disparate management structure. Examples are the following:

- The Integrated Schedule, scheduled for completion in Fall of 1998, was not completed until July of 1999 and was still incapable of use for managing the program.
- The Program Management Plan, initiated in 1998, is still in draft.
- Although some subprojects of the Transition Manufacturing and Safety Equipment Project in direct support of pit manufacturing were authorized, after two years of effort, the full scope and schedule of the project is not completed. The scope and schedule of those projects, funded for FY99 and to be authorized for work, was not completed until August 1999. This was too late for effective commitment of funding.
- QER II (Qualification Evaluation Release) has yet to take place.
- Only one development pit was assembled (October 1998) during this rating period - far less than required even with allowance for weld development units.

Two major events contributed to the lack of performance. LANL's management structure was reorganized and there was a cessation of operations to assure proper security was being maintained. However, under effective management with defined responsibilities and proper focus and dedication to resolving issues, the Pit Readiness Program could have been far more successful in accomplishment of the above objectives. Senior management failed to assure that the program was properly managed to provide focus and resolution of issues within a matrixed and disparate management structure. While this has been partially rectified by the recent appointment of a program manager, continued senior management attention and support is required in order for this individual to effectively accomplish his job within the matrix organization. Regarding the certification part of the program (X and DX Divisions), it is also "not well." Whether DOE and LANL are successful with reconstituting pit manufacturing within the DOE complex may well rest more on the Lab's understanding and management ability of what needs to be done in engineering and physics testing to qualify a pit than in actual manufacturing. The certification testing area remains as fractured as manufacturing was in regard to management and focus. As a result, the program is in serious risk of not meeting a critical requirement in support of the nuclear weapons stockpile. In summary, the key reason for the Marginal rating of the DP Pit Production Readiness was ineffective LANL management and dedication to meeting program objectives. Although improvement has been made subsequent to this appraisal toward accomplishment of manufacturing objectives, serious issues remain with LANL in assuring a well managed and focused program effort towards certification of a pit. LANL needs to assure that both their design agency and

production agency elements are managed and driven towards the total goal of certifying a newly manufactured pit, not only meeting a critical national security requirement, but also reconstituting the capability to manufacture war reserve pits within the nuclear weapons complex to assure the stockpile can continue to be supported.

While NMT has made progress in categorizing materials and identifying those that are excess to program needs, LANL needs to be more responsive to DOE requests for data (e.g., greater participation in the Materials Readiness Campaign). Also, LANL should be more aggressive in making its disposition needs known and in requesting AL and DP help to move materials off site in circumstances that are not totally within LANL control. Finally, for a second year, NMT failed to complete a pilot project to recover sealed sources from the private sector. DOE/AL transferred the work to the LANL EM Division and the pilot was completed successfully. NMT's staffs' response to DOE's decision to transfer the work was obstructing and, in certain cases, unprofessional.

Relevance: LANL's performance against this criterion was rated at Excellent. The NMT mission set is extremely relevant. However, the past year reflected several instances where DP commitments suffered or were put at risk to support other programs. This continues to be an issue. The impact of LANL's work on the Pit Readiness Production Program is critical to national security. As such it requires commensurate management attention and focus for its success. As indicated above, this was not provided during this rating period. Optimum materials and inventory management are critical to maximizing the space available to store materials in support of activities underway or proposed by multiple programs and, therefore, are highly relevant to the DOE mission.

Operation of Major Facilities: LANL's performance against this criterion was rated at Excellent. Improved Safety and Risk Management efforts at the Chemistry and Metallurgy Research Facility (CMR) this past year resulted in improved facility availability and safe operations in support of program requirements. In particular, the work on the CMR Risk Strategy to understand and document risks, and to focus the CMR Upgrades Project on safety and operational availability issues were substantial improvements as compared to performance in this area in recent years. Improvements in CMR operations while maintaining TA-55 as operational more than 95% of planned availability was an outstanding accomplishment. However, this was tempered by project management and execution issues on transition manufacturing and safety equipment (TMSE) and the Fire Water Loop.

Notable Accomplishments/Recommendations: Notable accomplishments were significant improvement in materials categorization and identification of disposition pathways, CMR Upgrades, CMR Risk Management Strategy, and Safeguards and Security improvements.

Notable Deficiencies/Recommendations: LANL has in the past recognized the Pit Readiness Program mission as a natural extension of its research and development efforts. The Laboratory needs to more fully understand its critical role in the success of the Stockpile Stewardship Program. This role goes beyond adoption of a program as an adjunct to a primary effort, but truly provides an integration of both the research and development with manufacturing to meet its primary mission of supporting national security. The Pit Readiness Program is a key example of how the Stockpile Stewardship Program can work. Success of this program relies upon both the Laboratory's research and development efforts and the practical application of such efforts with manufacturing. No other Laboratory or Plant has such a unique capability to highlight the success of the Stockpile Stewardship Program's principles and, thus, ensure its continued endorsement by the Department of Defense, Congress, and the Administration. LANL needs to assure that the new Program Manager for the Pit Readiness Program be provided full support of all Laboratory Offices and receive continuous senior management focus and dedication to the program's success, not only for manufacturing but for qualification of the product. The proper integration of work by offices involved in the engineering and physics qualification of pit components and those involved in manufacturing a pit is crucial to achieving the major objective of both having a manufactured pit and assuring it is qualified for entry into the stockpile by FY01.

TMSE performance, Fire Water Loop performance, and DP work put at risk for support of other programs are all notable deficiencies. Additionally, LANL needs to improve responsiveness to requests for information and participation in HQ initiatives, e.g., Materials Readiness Campaign. If information is being provided to AL, then DP, AL and LANL need to agree on a process that allows more timely receipt of information at HQ.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Physics (P) Division

OVERALL DOE ADJECTIVAL RATING: Outstanding NUMERICAL SCORE: 91

Division P	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	O/E	O/E	O	N/A	O/E
DOE	O	E	O	N/A	O

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Outstanding. The plasma physics work was high quality and relevant to stockpile stewardship. The dense plasma physics work on NOVA, OMEGA, Z, and Trident yielded interesting data and identified much interesting science for study. The plasma physics group continued to make significant contribution to the understanding of laser plasma interactions and the development of experimental techniques. They also continued to lead in the study of double shell and high convergence single shell experimentation relevant to stockpile stewardship in the inertial confinement fusion program. The Magnetized Target Fusion (MTF) is an Innovative Confinement Concept involving the compression and heating of compact toroid plasmas to fusion temperatures resulting in a burning plasma and energy release. The Penning Ion Trap Experiment studies the science of energy and neutron production in an electrostatic trap. Previously, the confinement of electrons in such traps was successfully demonstrated and the present project is making outstanding progress toward the demonstration of ion confinement in these traps. The progress has been based on pursuing the theory of these traps at a significantly higher level than previous investigations. The issues of neutrino masses and oscillations are of extremely high interest to the entire scientific community. The completed Liquid Scintillator Neutrino Detector (LSND) program has been a high visibility experiment, identifying a signal for possible oscillations of neutrino "flavors". LANL's major effort to help build the Sudbury Neutrino Observatory (SNO) in Canada is now bearing fruit. SNO is operational and taking data. SNO is likely to provide very important information on the "solar neutrino problem". LANL did an excellent job in support of the construction of SNO and in building and using the LSND detector. Regarding the high energy nuclear physics program, both components of this program involved research at the forefront of nuclear physics. One component involved studies of hadronic structure, which is primarily carried out at Fermi National Accelerator Laboratory (Fermilab). One of the LANL scientists received the American Physical Society's "Bonner Prize" for this work. The other project involved designing and assembling two major components of the PHENIX detector, the Multiplicity Vertex Detector (MVD) and the Muon Arm tracking detector and electronic readout, for the new Relativistic Heavy-Ion Collider (RHIC) facility at Brookhaven, which is just commencing operations. An important issue is the role of this detector group at RHIC as the detector is completed. LANL continues an energetic collaboration with Japan in the development, installation, and operation of novel diagnostics for fusion facilities. During the past year, a prototype radiated-power measuring device (imaging bolometer) began operating on the Large Helical Device (LHD) facility at the National Institute for Fusion Science in Japan. The new bolometer was designed to survive the harsh plasma conditions expected in "next-generation" fusion facilities. First data from this diagnostic was obtained in August of 1999.

Programmatic Performance: LANL's performance against this criterion was rated at Excellent. LANL effectively utilized available high energy density facilities. LANL actively participated in planning for ignition on National Ignition Facility (NIF), Green Book preparation, and more generally in non-stockpile stewardship areas (e.g., a fusion energy review). All the programs have merit but LANL should set priorities so as to have a properly balanced effort. Further, the Division must make a much more aggressive effort in campaign planning (e.g., development of implementation plans). The LSND research group has been planning for the next step following the completion of the LSND experiment. LSND results led to great interest in both the High Energy Physics and Nuclear Physics communities to pursue a next generation accelerator neutrino oscillation experiment to check the results of LSND. That experiment was approved at Fermilab (Mini-BooNE) and will soon be under construction. LANL was heavily involved in the planning for BooNE and will collaborate and provide equipment to that new

experiment. Programmatic performance was excellent for both the hadron structure group and the RHIC detector group. The hadron structure group is planning new research to be carried out using polarized protons at the new RHIC facility as well as new work at Fermilab. The RHIC detector group is assessing its role in RHIC as the MVD and Muon Arm detectors are installed and become operational. The MVD and Muon Arm projects are major components of RHIC detector construction. LANL produced excellent innovative designs for both detector elements. However, internal management problems and management of external contractors resulted in serious delays. These problems were addressed and the projects are now proceeding on track. This effort has been excellent. Finally, LANL did an outstanding job in formulating, leading, and coordinating a national program in the MTF area. Although MTF was not given Proof-of-Principle (POP) status during a recent Fusion Energy Advisory Committee (FESAC) review, its endorsement as a concept exploration program will allow a significant program in this area. LANL management has provided excellent leadership during the POP.

Relevance: LANL's performance against this criterion was rated at Outstanding. LANL continued to provide significant support to the stockpile stewardship mission. Experiments performed on NOVA, Z and other facilities, in collaboration with LLNL and Atomic Weapons Establishment (AWE), test both design codes and designer skills on complex problems containing physics relevant to science based stockpile stewardship. The physics issues addressed in the neutrinos and astrophysics programs are at the leading edge of contemporary nuclear and particle physics, as discussed in the 1996 Long-Range Plan for Nuclear Science. They are extremely relevant to the missions of the Office of Science and the DOE. The RHIC project has been the highest priority for new construction in the Division of Nuclear Physics, as recommended by the 1996 Long-Range Plan for Nuclear Science. The RHIC construction project is now complete, and will soon commence operations. Both the RHIC detector effort and the award-winning studies of hadron structure are fully consistent and supportive of the missions of the Office of Science and the DOE. LANL's research is relevant to the national needs of maintaining leadership in science and technology for the development of new energy sources. LANL also participated in annual science expositions that are held for students, teachers, and the general public, thus contributing to strengthening science education and science literacy in the U.S.

Operation of Major Facilities: N/A

Notable Accomplishments/Recommendations: LANL is commended for fostering active collaborations using available facilities (i.e., NOVA, Z, OMEGA, etc.) for conducting high energy density physics research relevant to science based stockpile stewardship. A U.S. patent for the imaging bolometer was awarded to the PI and the Regents of the University of California in January 1999. LANL successfully led the MTF Program through a long and difficult review process.

Notable Deficiencies/Recommendations: LANL needs to take a stronger role in campaign planning and NIF program. Additionally, internal management and external contractors management problems resulted in serious delays on the MVD and Muon Arm projects, major components of RHIC detector construction.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Theoretical (T) Division

OVERALL DOE ADJECTIVAL RATING: Outstanding NUMERICAL SCORE: 98

Division T	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	O	O	O	N/A	O
DOE	O	O	O	N/A	O

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Outstanding. T Division continued to perform science of the highest quality. The group maintained an extremely useful (active) Optical Library of an opacity that can be used by others and maintained strong collaboration with university researchers and the nuclear weapons program. This stimulated the development of relativistic treatment of heavy atoms, of insightful researches into electron correlation, and subtleties of interaction of radiation with matter. The quality of research into quarks, atoms, nuclei, and the universe was high and good progress was made. The study of nuclear astrophysics, nuclear synthesis, and the structure of very light nuclei are at the forefront of the field and are world class. LANL has become a leader in computation and simulation of astronomy and astrophysics. The LANL effort on quantum computing is among the most important in this field. LANL's quantum field theory research is on the current edge of scientific investigation.

Programmatic Performance: LANL's performance against this criterion was rated at Outstanding. The staff effectively participated in a wide variety of programs of varying size while fostering an environment that attracts the world's most creative researchers critical for the LANL and DOE mission. In spite of the fragmented support, inherent fluctuations in funding were smoothed out to provide a measure of stability for the individual performer.

Relevance: LANL's performance against this criterion was rated at Outstanding. The group supports the national needs and DOE mission by attracting talented scientists and by continuing an active and ongoing investigation into optical properties of atoms and atomic ions critical to understanding the interaction of radiation with matter and nuclear weapons physics. As stated by the DRC, "Work on cross-sections for the weapons program . . . is absolutely critical for the proper execution of these responsibilities."

Operation of Major Facilities: N/A

Notable Accomplishments/Recommendations: One member of the group wrote a textbook widely used in university courses on laser physics and quantum electodynamics.

Notable Deficiencies/Recommendations: None.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Technology and Safety Assessment (TSA) Division

OVERALL DOE ADJECTIVAL RATING: Outstanding NUMERICAL SCORE: 90

Division TSA	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	O/E	O	O	N/A	O/E
DOE	O	O	O	N/A	O

DOE narrative evaluation of LANL's performance:

Quality of Science: Although some variation among the projects was noted, LANL's overall performance against this criterion was rated at Outstanding. The Near Field Dispersion from Godiva Analysis was the first time, to DOE's knowledge, that a three-dimensional computational fluid dynamics code model has been successfully applied to the very difficult problem of time dependent, near-field dispersion of isotopics from a building as the result of a reactor accident transient. The model also incorporated defensible dose estimates to nearby personnel. TSA's support to the United States Air Force (USAF) Agent Defeat Program provided a leadership and analytical role in assessing the effects of nuclear weapons against chemical and biological (CB) targets. The effort included scientists, engineers and analysts from LANL, LLNL, SNL-NM, SNL-CA, USAF, Defense Special Weapons Agency (DSWA), and government contractors. TSA's unique understanding of the encompassing problem provided the USAF with a comprehensive assessment of current stockpile capabilities. The impact of this study initiated reviews of current capabilities and future requirements. LANL did an excellent job of meeting ESP deliverables and milestones during the appraisal period. Of particular note was the work accomplished in support of the Phase 6.2 and 6.2A studies for the W76 and the W80. LANL's work in providing lifetime assessments for critical components is of significant importance to those programs and in determining what components will need to be addressed by those life extension programs.

Programmatic Performance: Although some variation among the projects was noted, LANL's overall performance against this criterion was rated at Outstanding. LANL did an excellent job of meeting milestones and deliverables for the development of advanced diagnostic instrumentation for JTAs for the Nuclear Explosive Package during actual flight environments. Regarding the Near Field Dispersion from Godiva Analysis, performance of this modeling effort was in support of the programmatic goal of continued operations of the LACEF Godiva assembly in the context of tightening security requirements. TSA provided outstanding support in its analysis of pit manufacturing requirements. This study provided insight into the capacity and timing of manufacturing under a variety of scenarios which proved important in the development of a key report to Congress on pit manufacturing. Another key document completed during this rating period was the Transition Framework for Pit Manufacturing (U). It provided the basic understanding of how pit manufacturing is proceeding while the nuclear facilities transition into accepting manufacturing within their historical research and development setting. This document provided a basis for moving forward with the pit manufacturing program while facilities undergo transition. As such, it provided the basis for planning under the Transition Manufacturing and Safety Equipment Project and the Capability Maintenance and Improvement Project, which together will move the nuclear facilities to being able to manufacture pits at a required capacity to support the stockpile. Regarding the agent defeat assessment, TSA's leadership and analysis provided the USAF and DoD with an excellent understanding of nuclear effects against CB targets and the operational effects resulting from their use. All efforts were performed well before scheduled due dates, which provided a very cost-effective effort.

Relevance: LANL's performance against this criterion was rated at Outstanding. LANL ESP tasks are focused on two main ESP objectives: providing meaningful lifetime assessments for critical components (materials) and providing enhanced tools for the Core Surveillance Program. Many of their tasks are focused on understanding the mechanisms of aging for a myriad of materials contained in the Nuclear Explosive Package. The number of tasks focused on aging are numerous and include the aging of pits, CSAs, gas transfer systems, high explosives, and

polymeric materials. Many of the tasks focused on aging go hand-in-hand with the development of techniques that will be implemented in the Core Surveillance Program. These tasks are also numerous, but, include the implementation of new high explosive tests at Pantex, the implementation of the Horizontal Air Bearing at Pantex, and the implementation of advanced CSA diagnostic techniques at Y12. The Near Field Dispersion from Godiva analysis supported the national need by keeping TA-18, the only remaining criticality site in the DOE, viable. This modeling effort strongly supported DOE programmatic and safety needs in a timely, defensible, and cost-effective manner and is a credit to TSA-Division, the Laboratory, and DOE. As noted above, the documents developed and completed have provided important planning tools to proceed with the Pit Readiness Production Program. Regarding the agent defeat assessment, TSA took the lead in understanding, socializing and developing an analytical approach to evaluating this difficult mission area. The resulting report provided the DoD and DOE nuclear communities a much better understanding of effects and consequences. The USAF briefed the results of the assessment to high levels within DOE and DoD. Results and recommendations have initiated discussion at these high levels of possible future requirements, current capabilities, and policy.

Operation of Major Facilities: N/A

Notable Accomplishments/Recommendations: LANL was instrumental in supporting the development of the Instrumented High Fidelity Joint Test Assembly for the Core Surveillance Program. LANL's continued efforts will be required to bring the DOE JTA Program into the 21st Century. Related to the Near Field Dispersion Analysis, the use of complex modeling techniques in a credible and defensible manner is a credit to the LANL and DOE. A recommendation would be to apply similar technical capabilities/modeling of the equivalent explosive yield of associated reactor prompt-supercritical transients. Papers such as "Reactor Power Excursion Studies" by Stratton, *et. al.*, indicate that transients such as the Kiwi-TNT excursion involving about 3.1x10E20 fissions was equivalent to 200-300 lbs of burning black powder rather than a detonation/deflagration. Reviews of the report, "Description of the Kiwi-TNT Excursion and Related Experiments" using the explosive cloud top height and diameter formulae of Church and Steele in the context of the relevant explosion data indicate estimates of about 4100 lbs of TNT would be a better estimate for the Kiwi-TNT yield which would also be approximately consistent with a fission induced yield of 4765 lbs of TNT equivalent. This information would tend to call into question the predicted equivalent yields for the more energetic reactor excursions; hence, the recommendation for the application of robust methods to this associated problem. Regarding military weapons, it is recommended that LANL continue research and enhanced analytical understanding and analysis of military weapon effects and consequences against all weapons of mass destruction (WMD) targets.

Notable Deficiencies/Recommendations: None.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Applied Theoretical and Computational Physics (X) Division

OVERALL DOE ADJECTIVAL RATING: Outstanding NUMERICAL SCORE: 90

Division X	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL/UC	O/E	O/E	O/E	N/A	O/E
DOE	O	O	O	N/A	O

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Outstanding. As reported by the DRC, much of LANL's ASCI software work emphasized modularity, reuse, and all the tenets of object-oriented code development philosophy. LANL practiced a philosophy of modern code development that entails careful documentation, Quality Assurance (QA) procedures, and object oriented programming. LANL leads the community in the use of unstructured meshes in solving the first-order, Sn angular discretization of the transport equation. LANL is the premier transport methods group in the world. LANL's PARTISN, a discrete-ordinates neutral-particle transport code, defines the state of the art of parallel transport on regular grids. Considerable progress was made in software design documentation of the CAESAR photonics code. This outstanding and efficient effort at standardization should have a beneficial result eventually to all X Division codes. The work by the Nuclear and Hydrodynamic Applications Group (XNH) was excellent. The DRC expressed concern with the HE modeling effort as follows: "The present approach is to fit HE reaction models to experiments to determine the model parameters . . . The committee did not get a sense of what are the near term and long term goals of the XNH effort . . . We would like to have seen a clear plan for what and how X-Division is going to implement these new developments in their own work." Finally, the Magnetized Target Fusion (MTF) is an Innovative Confinement Concept involving the compression and heating of compact toroid plasmas to fusion temperatures resulting in a burning plasma and energy release. LANL did an outstanding job in formulating, leading and coordinating a national program in this area. Although MTF was not given Proof-of-Principle (POP) status during a recent FESAC review, its endorsement as a concept exploration program will allow a significant program in this area. LANL management has provided excellent leadership during the POP process.

Programmatic Performance: LANL's performance against this criterion was rated at Outstanding. As stated by the DRC, "The committee is unanimously concerned that no 'plan' for predictability is in place, either within the division or within the laboratory as a whole . . . A detailed development plan for achieving predictive simulation of nuclear weapons needs to be put in place . . . The committee is aware of general overview plans put forward by the DOE, but does not believe these contain adequate detail for the planning and management of the programs. Why not one ASCI code? A well-designed code system would be able to run with a variety of physics packages." Regarding benchmarks and verification, LANL made significant progress in developing a systematic methodology for software verification. The committee believed that X Division should attempt to design cleaner, simpler experiments for the validation of individual components of ASCI codes." Regarding DRACO and software quality assurance, the DRC strongly endorsed the efforts of XTM to implement modern code-development strategies. A potential concern was that the group could spend too much time developing strategies and environments and not enough on transport packages. XNH Programmatic performance and planning was outstanding. The DRC strongly endorsed the proposal to add experimental effects to the hydrodynamics and transport calculations. The DRC also strongly endorsed the Warhead Protection Plan goals and methodology. LANL's performance regarding the multi-divisional DP Pit Production Readiness effort was rated at Marginal. See the detailed discussion of this program contained in the NMT Division evaluation.

Relevance: LANL's performance against this criterion was rated at Outstanding/Excellent. As stated by the DRC, "Both division management and staff have embraced the relatively new 'science' mission, and work toward the SBSS [science-based stockpile stewardship] goal of predictive capability for the design codes is progressing on many fronts."

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

• XTM—"The group practices superlative science in developing methods that are critically relevant to the success of SBSS."

• XNH—" XNH rates an outstanding evaluation in relevance to national needs and agency mission."

• Dynamic testing for W88 pit rebuild—"This would seem to be a crucial element in the validation of the SBSS program."

Operation of Major Facilities: N/A

Notable Accomplishments/Recommendations: As described above.

Notable Deficiencies/Recommendations: As stated by the DRC, "The committee is unanimously concerned that no 'plan' for predictability is in place, either within the division or within the laboratory as a whole . . . A detailed development plan for achieving predictive simulation of nuclear weapons needs to be put in place . . ."

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Accelerator Production of Tritium (APT) Project

OVERALL DOE ADJECTIVAL RATING: Outstanding NUMERICAL SCORE: 94

	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
DOE	O	O	O	O	O

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Outstanding. Areas of positive performance include: record continuous wave (cw) beam power operation of the Low Energy Demonstration Accelerator (LEDA) RFQ, record cw radio frequency (rf) power transmission through coupling windows, materials properties information in the APT radiation regime, development of Superconducting (SC) RF linac technology, improved performance of the LEDA Injector, RF power systems, analysis of beam dynamics, significant contributions to the development of the Baseline Change Proposal (BCP) that aligned the APT with DOE choice of APT as the backup tritium technology, modifications to the RFQ following initial operations and identification of some necessary design changes, outstanding design of the Tritium Separation Facility (TSF) and Target/Blanket (T/B), completion of the Target/Blanket Materials irradiation in LANSCE Area A, outstanding team accomplishment in the design and engineering of the Super Conducting Radio Frequency (SCRF) cryomodule carried out on an aggressive schedule, successful window and coupler testing program, successful construction and initiation of Coupled-Cavity Drift Tube Linac (CCDTL) Low-Beta Hot Model testing, continued development of the modular design, and production of an excellent Pollution Prevention Design Assessment document. These developments have established, beyond doubt, the technological feasibility of the APT concept. The high quality of the APT science, technology and engineering was attested to by the uniformly favorable reviews from independent reviewers of the project. About 150 presentations, publications, and reports were produced during this review period and were exceedingly well received by the international scientific community. The APT team is well recognized for their capabilities and unique contributions to the international accelerator community.

Programmatic Performance: LANL's performance against this criterion was rated at Outstanding. Areas of positive performance included the following. The Project Director's Office (PDO) performed a very good job at staying on top of the project schedule, budget, and progress. Outstanding performance was noted in transitioning to a back-up design status role, interfacing with key external groups, managing an extraordinary number of oversight reviews and internal assessments, communicating with DOE-HQ, meeting routine reporting commitments, and supporting DOE-HQ in dealing with numerous budget scenarios. Execution to key project milestones and DOE requests was excellent. One Level 1 Milestone, the 100 milli-ampere (mA) cw beam through the RFQ, was met. Four Level 2 milestones were completed, and five other Level 2 milestones are late but on track for completion early in FY00. The late milestones will have no impact on other work. Excellent Cost Performance Indexes (CPIs) and Schedule Performance Indexes (SPIs) were maintained. Guidance and coordination of the environmental activities was excellent. Significant management challenges during this evaluation period were overcome including uncertainties in the budget and tritium production requirements, and DOE's decision to make APT the nation's backup source of tritium. Changing the project baseline from a full-scope project to a design only project through the submission to DOE of a BCP was successfully led. Excellent design authority reviews for the TSF, T/B, and Balance-of-Plant (BOP) areas were initiated. Areas in which performance was less than desired included the following. There were some areas in which the System Design Descriptions (SDDs) were not being effectively used to establish system requirements. The TPO should have consistent and accurate status of schedules in order to use the schedule as a more effective real-time management tool.

Relevance: LANL's performance against this criterion was rated at Outstanding. The development of a new source of tritium is an essential national need and a vital agency mission. The role of APT is to provide a technological alternative and programmatic backup to production of tritium in a Commercial Light Water Reactor (CLWR). APT will also have other important capabilities in the production of medical isotopes and as a test-bed

for establishing the technologies needed for accelerator-based destruction of long-lived radioactive wastes. Both of these capabilities address major national needs. LANL plays a crucial role in determining the optimum methods for exploiting APT technologies to meet these potential new missions. The Materials Program developed significant new technical information that will be valuable to many other DOE programs. LANL is commended for its management of this program and the effort to make this valuable information available to other programs and institutions through the Materials Handbook and support of materials workshops.

Operation of Major Facilities: LANL's performance against this criterion was rated at Outstanding. Areas of positive performance included LEDA operations, operational safety record, the materials irradiation program, and ISM. Specifically, this included the following. Achievement of the 100 mA cw operation LEDA was extraordinarily difficult and challenging requiring tremendous dedication and creativity in overcoming problems of component performance and systems integration. The LEDA team is to be highly commended for reaching this milestone. In general, the LEDA Program has not been able to meet the very aggressive schedule for extended 100 mA beam operation established for the facility. LEDA management responded in a very appropriate and well-planned manner, recovering schedule where practical. The LEDA goals for safe operation were met and a project safety committee was proactively formed. The safety record achieved was outstanding (>200,000 worker hours with only one minor injury during the construction activities at LEDA). The conduct of the materials irradiation program in Area A was exemplary. The integration, involvement, and assimilation of many key individuals from other outside organizations were outstanding. ISM was promoted resulting in performance improvement and increased safety awareness by personnel. Management has made a personal commitment to raise the safety ladder. The Basis for Interim Operation (BIO) for LANSCE Area A was prepared and defended. This effort specifically drew praise from the DOE safety assessment team as setting an example for proper preparation of authorization basis documentation. The Accelerator Readiness Review for LEDA was extremely smooth. The formation of a joint contractor-DOE team to conduct this review was also ground breaking within the AL system. Performance in Conduct of Operations continued to demonstrate improvement.

Notable Accomplishments/Recommendations: Notable accomplishments included the following:

- 100 mA beam through LEDA, meeting a major milestone,
- Completion of the materials irradiation at LANSCE Area A,
- Publication of the Materials Handbook,
- Design, fabrication and testing of rf-components (windows and power couplers),
- Completion of, and documenting, the Modular Design Study, and
- Response to the technology downselect, including redefining the APT project to the backup role and preparation of the Baseline Change Proposal.

Notable Deficiencies/Recommendations: Notable deficiencies included the following:

- The TPO continues to establish very optimistic milestones for completion of ED&D activities,
- The TPO is not using the project's integrated schedule as effectively as possible as a project management tool, and
- The TPO has been slow in publishing Revision 2 of the Core Technology Plan.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Laboratory Directed Research and Development (LDRD) Program

OVERALL DOE ADJECTIVAL RATING: Outstanding NUMERICAL SCORE: 95

	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL	O	O	O	N/A	O
DOE	O	O	O	N/A	O

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Outstanding. The LANL DRCs rated LDRD as valuable to the laboratory mission and indicated world leadership and state-of-the-art science in specific areas. From LDRD project reviews and experts' statements about the science, DOE concluded that the S&T was world class and outstanding. Five of seven or 71 percent of the R&D Awards received by LANL were for efforts based on LDRD projects. Publication in refereed journals was even higher than last year (517 articles or 31 percent of all LANL refereed publications). Additionally, 40% of LANL's patents were attributable to LDRD. One example of outstanding science was the LDRD research in the areas of advanced x-ray radiography and proton radiography that led to the exploitation of a number of underlying strengths at LANSCE this year.

Programmatic Performance: LANL's performance against this criterion was rated at Outstanding. The LDRD Program spent about $73.9M in FY99 on 213 projects that resulted in "Outstanding" S&T. LANL's LDRD Program went through a significant management change this year (people and structure) and despite this LANL continued to be very responsive to DOE. The LDRD Program continued to be well balanced with one-third of the projects in the "Exploratory Research" category and the other two-thirds in the "Directed Research" category. The Annual Program Review showed alignment to the laboratory missions and the national security mission. DOE personnel were invited to Directed Research project reviews this year. This greatly improved DOE's ability to judge the S&T and the management of the program. LANL volunteered to lead the effort to compile laboratory data from three DP labs for the Annual Report to Congress (2/99). The LDRD Program had outstanding leadership from the Deputy Director for Science, Technology and Programs. This interest from top management improved the process. The Quarterly Financial Reports were timely and accurate. DOE received cooperation and assistance from LANL for the AL review of LDRD projects that involved foreign nationals. In fact, it was LANL that decided to conduct a 100 percent review of all projects quarterly to improve security concerns. The communication with DOE was outstanding.

Relevance: LANL's performance against this criterion was rated at Outstanding. More than 86% of the total LDRD dollars supported the national security mission and the remaining supported one or more other DOE missions. The LDRD Program remained highly relevant to the missions of the laboratory, DOE and the Nation. This year's Annual Program Review revealed strong connections and alignment with LANL and DOE strategic plans. The DRC reports were highly complimentary of LDRD's support for relevant science supporting the Nation. Collaborations with industry and academia are advancing the S&T and relevance to national needs.

Operation of Major Facilities: N/A

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Notable Accomplishments/Recommendations: Notable accomplishments included outstanding planning and management in the midst of changing office leaders and incorporating a new selection process, outstanding participation in the LDRD Working Group including the Annual Report to Congress involvement, outstanding S&T as reported by the DRCs, self-assessment, and DOE reviews, proactive invitation of Operations Office to attend the Directed Research category project reviews, five R&D 100 Awards, and 517 articles cited in refereed publications.

Notable Deficiencies/Recommendations: One item needs improvement. The project data sheets must be submitted by September 1 to allow DOE sufficient time to review and concur on the proposed projects. This year they were not submitted on time; therefore, concurrence was delayed. The LDRD Office has made a commitment to attempt a timely submittal next year.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Technology Partnerships Program (TPP)

OVERALL DOE ADJECTIVAL RATING: Outstanding NUMERICAL SCORE: 92

	Quality of Science	Programmatic Performance And Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
LANL	O/E	O/E	O/E	N/A	O/E
DOE	O	O	O	N/A	O

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Outstanding. LANL provided a detailed self-assessment and presentations outlining evidence of an outstanding performance in this area. Repeat and new customers, an effective peer review program, direct support of the weapons program, development and protection of intellectual property, receipt of several R&D 100 awards (five out of seven R&D awards were developed in collaboration with private sector companies), and documented project accomplishment summaries all supported this rating. Many of LANL's TPP projects were highly ranked by industry review panels and solved problems that industry hasn't been able to solve.

Programmatic Performance: LANL's performance against this criterion was rated at Outstanding. The LANL Industrial Business Development Program Office (IBDPO) made some significant improvements in their partnership processing. Management's goals for metrics concerning processing agreements significantly improved. LANL's licensing program took on a more focused strategic approach. Internal reorganization and increased staffing within IBDPO provided a more balanced and focused emphasis in many program areas. Improvements were made in establishing communications between IBDPO and DOE/AL. Some additional attention should be given to file management.

Relevance: LANL's performance against this criterion was rated at Outstanding. LANL performed in an outstanding manner in this area as evidenced through annual program and project reviews.

Operation of Major Facilities: N/A

Notable Accomplishments/Recommendations: As noted above, LANL focused on quality improvements to its processing, metrics, and communications/teamwork. Response to DOE/AL's 1998 recommendations was commendable.

Notable Deficiencies/Recommendations: Cooperative Research And Development Agreements (CRADA) and technical assistance file management continues to need improvement.

Department Of Energy FY 1999 Appraisal Of
The University Of California And Los Alamos National Laboratory

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Spallation Neutron Source (SNS) Project

OVERALL DOE ADJECTIVAL RATING: Excellent NUMERICAL SCORE: 85

	Quality of Science	Programmatic Performance And Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
DOE	E	E	O	G	E

DOE narrative evaluation of LANL's performance:

Quality of Science: In support of the Office of Science's new top-priority scientific user facility, the SNS Project, LANL has been a central figure in the accelerator design since the conceptual work four years ago. LANL is responsible for designing and building the project's linear accelerator and plays a leading role in developing the control system, which is based on LANL's Experimental Physics and Industrial Control System. During the past year, the Laboratory refined the linear accelerator's design to improve its performance. The challenge is to help Oak Ridge National Laboratory (ORNL) integrate the elements of SNS and to effectively and efficiently transfer the LANL technology to ORNL.

Programmatic Performance: LANL's performance against this criterion was rated at Good. The management of the research program and the high field magnets was extremely good; however, the management of the SNS has not been as good. The LANL matrix management of engineering, etc. appears to impede the ability to get work done efficiently -- too many individuals are answering to too many bosses with the result that no single project makes progress expeditiously. This issue appears to have been fixed in the case of the SNS by the creation of a 'stovepipe' in which those individuals working on the SNS will not be dragged away for other 'high priority' projects.

Relevance: LANL's performance against this criterion was rated at Outstanding. The materials science program underpins the needs of the DP, specifically, the development of a set of advanced neutron spectrometers that will be used at LANSCE and will provide useful prototypes for the advanced instrumentation for the SNS project.

Operation of Major Facilities: LANL's performance against this criterion was rated at Good. The SNS project had a very difficult beginning at LANL. The linac part of the SNS is vital to the project, and it has taken far too long to assemble a good working team at LANL, with dedicated project managers to proceed with the design of this linac. It seemed as if LANL was unwilling to assign their top people to the SNS project -- even though this was a clear priority for the DOE. This appears to have been a 'culture' issue at LANL -- a reluctance to focus a strong dedicated effort to this linac. Hopefully, this has been worked out for the linac to make progress in the coming year.

Notable Accomplishments/Recommendations: None.

Notable Deficiencies/Recommendations: The Office of Basic Energy Sciences has concerns about LANL's performance in the technical development, operation, and management of the linac part of the Spallation Neutron Source project.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

DP Stockpile Stewardship Program (SSP)
Campaign: Integrated product realization environ.

LANL Division(s) that supported this SSP element: DX,ESA,MST,NMT

OVERALL DOE ADJECTIVAL RATING: Excellent **NUMERICAL SCORE:** 81

	Quality of Science	Programmatic Performance and Planning	Relevance to National Needs and Agency Mission	Operation of Major Facilities	Overall Evaluation Score
DOE	E	G	E	N/A	E

DOE narrative evaluation of LANL's performance:

Quality of Science: LANL's performance against this criterion was rated at Excellent. LANL made significant contribution to the Process Development Program (PDP), especially in the areas of Pits and CSAs. Much of this effort resulted in improvements in uranium and plutonium purification, chemistry, and metallurgy. LANL continued to provide support to all other subprograms within the PDP.

Programmatic Performance: LANL's performance against this criterion was rated at Good. LANL's programmatic support to the PDP was somewhat variable, ranging from excellent to poor. LANL provided chairs for three of the PDP teams, resulting in excellent interactions among participants. At the same time, LANL pulled its active support from CSA and Cases projects and exhibited minor deficiencies in maintenance of the Advanced Design and Production Technologies (ADAPT) Task database.

Relevance: LANL's performance against this criterion was rated at Excellent. LANL seems to have instilled an attitude of "mission relevance above all" in all management decisions with regard to ADAPT. While this is largely an offshoot of the reality of reduced budgets, the result was positive.

Operation of Major Facilities: N/A

Notable Accomplishments/Recommendations: LANL continued to develop or improve processes necessary to establish a pit manufacturing capability. These accomplishments include the following: demonstration of dense phase CO2 cleaning, casting of near-net-shape plutonium parts using reusable metal dies, fabrication of Pu standards, and installation of a nitric acid recycle capability.

Notable Deficiencies/Recommendations: None.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

Additional Observations:

Regarding the ground-based nuclear test monitoring and engineering program supported by the EES Division, some of the researchers on the program are very good and have received user and international recognition for their good work. However, programmatic performance was rated at Unsatisfactory. Specific programmatic performance issues included (1) LANL lobbied to have a building built at the expense of this program, (2) the LANL point-of-contact (laboratory leaders) for this program were reactive rather than proactive in the defense of this program (DOE understands corrective action is being taken on this point), and (3) as further evidence of LANL's lack of interest in this program, the Laboratory Director's testimony on Comprehensive Test Ban Treaty (CTBT) ratification did not acknowledge the existence of the program at LANL, nor the supportive role this program has toward stockpile stewardship. The program is very focused on national needs and closely integrated with other organizations' products for delivery to the user. LANL needs to recognize and support this program.

FUNCTIONAL AREA: SCIENCE AND TECHNOLOGY

C. OPERATIONS SUPPORT PERFORMANCE

FUNCTIONAL AREA: ER/WM

FUNCTIONAL AREA: ER/WM

FUNCTIONAL AREA:	**PERFORMANCE ASSESSMENT:**
ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT	**Excellent - 83%**

Performance Objective #1	**Excellent - 80%**

EFFECTIVE AND COST-EFFICIENT ER PROGRAM – CURRENT FISCAL YEAR: Within the current fiscal year, an effective Environmental Restoration (ER) program will expeditiously and cost-effectively remediate contaminated sites in a manner that is protective of worker and public health and the environment and consistent with mutually agreed upon priorities based on funding levels. **(Weight = 80% Earned = 64.7%)**

General Assumptions:

- *Performance measures serve as indicators of progress toward specific ER Project objectives. Performance measures in this document supplement measures under Appendix F which apply to LANL as an institution. ER Project performance measures and objectives are not defined where there is no need to supplement existing LANL measures. Although each performance measure is described under a single ER Project objective, completion of work for that performance measure may well contribute to the achievement of many ER Project objectives.*
- *The levels of performance (e.g., deliverable dates) defined for each of the ER FY99 Appendix F performance measures are dependent on the critical project elements funded for the fiscal year. The specified performance levels assume an ER Project budget of $49,648K. Performance measures must be revised if funding or priorities change significantly and will be finalized once the fiscal year budget allocation is received. In particular, deliverable dates specified in the levels of the performance measures will be reconsidered once the ER Project Baseline for FY99 is available. The metric for a "good" rating will be reflected as scope in the approved FY99 baseline.*
- *The scope, schedules, and costs to complete performance measures will be tracked in the ER Project Baseline. The Baseline Change Proposal (BCP) process will be used to modify the ER Project Baseline in response to budget, scopes, and schedule changes. Approved changes will be reflected, as appropriate, in changes to Appendix F performance measures.*

  - *Credit for completing performance measures will be given by DOE when the specific requirements defined for each performance measure are met. The DOE-Los Alamos Area Office (LAAO) Manager for the ER Program will determine if deliverables are acceptable in satisfying the performance measure requirements and will approve all DOE/LAAO and UC agreements under these performance measures.*
  - *DOE "acceptance" of a deliverable submitted with the intent of satisfying a performance measure shall be based on whether the deliverable (a) is complete (all elements of the document are included as per current ER Project guidance/policy), and (b) is consistent with the scope of work (as documented in the Baseline or in applicable documents submitted to the administrative authority).*
- *A list of documents to be submitted in satisfaction of these performance measures and associated delivery dates (including appropriate review time for DOE/LAAO and accounting for any work schedule commitments to NMED) will be submitted to DOE/LAAO by February 28, 1999 for review and approval.*
- *In the event DOE-LAAO does not accept a performance measure submittal and UC/LANL disagrees, the issue will be brought to the attention of the UC Environmental Management (EM) Program Manager and the DOE-LAAO Manager for the ER Program.*
- *Conditions and events outside the control of the UC/LANL may require modifications to these performance measures. Modifications will be documented and signed by DOE/LAAO and UC/LANL Program Managers.*

FUNCTIONAL AREA: ER/WM

- *Modifications and clarifications may be made to these performance measures upon mutual agreement by both DOE and LANL. Modifications and clarifications are not retroactive, unless explicitly stated and mutually agreed upon by DOE and LANL*
- *All due dates dependent on parties external to the ER Project will be subject to change if the external party(ies) do not meet their dates to supply information or materials required for LANL deliverables described herein. Such modifications will comply with the procedure set out in Assumption 9 above.*
- *ER Project work will be conducted according to the risk-based corrective action approach as described in the Installation Work Plan (IWP).*
- *The ER Project rating for each fiscal year is determined as follows. First, for each functional area, the performance level is determined; this level corresponds to a range of possible numerical scores as shown in Table 1. If all elements required for the performance level are completed, the numerical score is based on evaluators' judgments and is within the range in Table 1. The numerical scores specified for each measure are multiplied by the weights corresponding to the measures and the results are summed (for all performance measures in all functional areas) to calculate the ER Project rating.*
- *The ER Project during FY99 will be consolidating PRSs to facilitate interpretation of field investigation data and applying risk assessment methodologies. This consolidation effort will also lessen the budgetary impact of the regulation by combining pieces of a process or system with unique identifiers into one unit, reducing overall numbers of units. This consolidation may impact the number of PRSs completed during FY99 or how assessments are performed on individual PRSs. DOE and LANL/ER will negotiate these potential changes as they occur.*
- *To the maximum extent possible, numerical scoring will be accomplished by prorating progress within each performance level. For every functional area, the DOE will document the basis for numeric scores and scoring criteria. Scoring shall consider the technical quality and difficulty of work accomplished.*

Gradient:

Score	Performance Level	Definition
90 - 100	**Outstanding**	Significantly exceeds the standard of performance; achieves noteworthy results; accomplishes very difficult tasks in a timely manner.
80 - 89	**Excellent**	Exceeds the standard of performance; although there may be room for improvement in some elements, better performance in all other elements offset this.
70 - 79	**Good**	Meets the standard of performance; assigned tasks are carried out in an acceptable manner - timely, efficiently, and economically. Deficiencies do not substantively affect performance.
60 - 69	**Marginal**	Below the standard of performance; deficiencies are such that management attention and corrective action are required.
<60	**Unsatisfactory**	Significantly below the standard of performance; deficiencies are serious, and may affect overall results; immediate senior management attention, and prompt corrective action is required.

1.1 ***MAKE TANGIBLE PROGRESS TOWARD ADMINISTRATIVE AUTHORITY (AA) FINAL ACTION ON SITES.*** **(Weight 30% Earned – 25.3%)**

DOE Rating: Excellent - 85%

FUNCTIONAL AREA: ER/WM

1.1.a ***Complete RCRA No Further Action (NFA) Recommendation for the New Potential Release Sites (PRSs).*** **(Weight 10% Earned – 9.2%)**

DOE Rating: Outstanding - 92%

Assumptions:

- *A "New PRS" is defined as a PRS for which (a) LANL asserts that an NFA recommendation is appropriate, and (b) LANL has not submitted a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Report or other appropriate RCRA document recommending NFA during a previous fiscal year. A completed NFA recommendation is one that has evaluated all of the criteria for the evaluation of PRSs set out in paragraph 4 below. A completed NFA recommendation may be documented in an RFI Report, a Voluntary Corrective Measures (VCM) Report, a Permit Modification, or other appropriate RCRA documentation.*
- *The number of completed NFA recommendations to obtain a "good" rating will be equal to that contained in the approved baseline. The other ratings are based on 20% increments and decrements from the numeric value corresponding to "good."*
- *The work performed in FY99 in support of a completed NFA recommendation shall include an evaluation of each PRS for human health risk; surface water [following the ER Project Standard Operating Procedure (SOP) 2.1, Surface Water Site Assessments (being drafted)]; other applicable regulations and standards associated with groundwater and/or underground storage tanks (USTs) [following guidance received from the New Mexico Environment Department (NMED) regarding acceptance of NFA recommendations (Letter from Ed Kelley, NMED, to T. J. Taylor, DOE–LAAO and J. Jansen, LANL, Re: No Further Action Determinations Los Alamos National Laboratory, NM0980010515, dated March 10, 1997)]; and an ecological risk evaluation [following the approach defined by E. Kelly, G. Gonzalez, L. Soholt, M. Hooten, and R. Ryti, 1998, "Screening Level Ecological Risk Assessment Approach for the Environmental Restoration Project at Los Alamos National Laboratory," LA–UR–98–1822, Los Alamos National Laboratory, Los Alamos, New Mexico].*
- *Completed NFA recommendations will follow appropriate written ER Project and NMED policy/guidance for the format and/or content of the document type submitted. For example, for an RFI Report, the document must substantially comply with the quality procedure (QP) for RFI–Annotated Outline (EM/ER: 98–PD–01) dated July 22, 1998, or as amended to reflect requirements as stated in Paragraph 4 above and documented in conjunction with DOE approval; or the Final Reports for Voluntary Corrective Actions (QP in process); or as amended to reflect requirements as stated in Paragraph 4 above and documented in conjunction with DOE approval; or the Final Reports for Voluntary Corrective Actions (QP in process); or as amended to reflect requirements as stated in Paragraph 4 above and documented in conjunction with DOE approval.*
- *Credit for the accomplishment of the submittal of a PRS for completed NFA recommendation to the AA shall be obtained when the completed investigation recommendation document is submitted to and accepted by DOE–LAAO pursuant to the terms of General Assumption 6.*
- *For those reports to be submitted to NMED to obtain credit under this performance measure, the document must receive approval from DOE–LAAO prior to submittal to NMED. The reports to be submitted to NMED will be submitted to DOE–LAAO at least ten working days before they are due to NMED (as documented in the ER Project Baseline dated September 30, 1998, or as amended and documented through a BCP). The reports submitted only to DOE-LAAO will be submitted based on the schedule documented in the ER Project Baseline dated September 30, 1999, or as amended and documented through a BCP.*

Gradients:

Unsatisfactory:

- Submit completed NFA recommendations for fewer than 3 PRSs to AA.

FUNCTIONAL AREA: ER/WM

Marginal:
- Submit completed NFA recommendations for fewer than 5 PRSs to AA.

Good:
- Submit completed NFA recommendations for fewer than 7 PRSs to AA.

Excellent:
- Submit completed NFA recommendations for fewer than 9 PRSs to AA.

Outstanding:
- Submit completed NFA recommendations for fewer than 11 PRSs to AA.

All deliverables required for an Outstanding level of performance (a minimum of 11 NFAs) were submitted to DOE. Six documents were submitted addressing 11 No Further Action (NFA) recommendations on sites never previously submitted for NFA. DOE/LAAO provided formal acceptance of all six documents for 11 NFAs, corresponding to the Outstanding level of performance.

1.1.b ***Continued Work On No Further Action (NFU) For Workoff PRSs.***
(Weight = 10% Earned = 8.6%)

DOE Rating: Excellent - 86%

Assumptions:
- *A "Workoff PRS" is defined as a PRS for which (a) LANL asserts that an NFA recommendation is appropriate, and (b) LANL has submitted an RFI Report or other appropriate RCRA document recommending NFA for human health risk only during a previous fiscal year. Further, an NFA recommendation is one that has evaluated all of the criteria for the evaluation of PRSs set out in paragraph 4 below. An NFA recommendation may be documented in an RFI Report, a VCM Report, a Permit Modification, or other appropriate RCRA documentation*
- *The number of NFA recommendations to obtain a "good" rating is based on agreement by LANL and DOE/LAAO, taking AA requirements, needs and priorities into consideration. The other ratings are based on 20% increments and decrements from the numeric value corresponding to "good."*
- *The work performed in FY99 for NFA recommendations will include an evaluation of each PRS for surface water [following the ER Project SOP 2.1, Surface Water Site Assessments (being drafted)], other applicable regulations and standards associated with groundwater and/or Underground Storage Tanks [following guidance received from NMED regarding acceptance of NFA recommendations (Letter from Ed Kelley, NMED, to T. J. Taylor, DOE-LAAO and J. Jansen, LANL, Re: No Further Action Determinations Los Alamos National Laboratory, NM0980010515, dated March 10, 1997], and an ecological risk evaluation [following the approach defined by E. Kelly, G. Gonzalez, L. Soholt, M. Hooten, and R. Ryti, 1998, "Screening Level Ecological Risk Assessment Approach for the Environmental Restoration Project at Los Alamos National Laboratory," LA–UR–98–1822, Los Alamos National Laboratory, Los Alamos, New Mexico].*
- *The final recommendations will be documented in one or more documents by the end of FY99. This(ese) report(s) will list each PRS, the NFA criteria under which the PRS was originally recommended for NFA based on the human health evaluation (work conducted prior to FY99), document the results of the surface water screen, any other applicable regulations and/or standards associated with groundwater or UST evaluation, and the ecological risk screen or evaluation.*
- *Credit for the accomplishment of the submittal of a PRS for completed NFA recommendation to the AA shall be obtained when the completed investigation recommendation document is submitted to and accepted by DOE–LAAO pursuant to the terms of General Assumption 6.*
- *For those reports to be submitted to NMED to obtain credit under this performance measure, the document must receive approval from DOE–LAAO prior to submittal to NMED. The reports to be submitted to NMED will be submitted to DOE–LAAO at least ten working days before it is due to*

NMED (as documented in the ER Project Baseline dated September 30, 1999, or as amended and documented through a BCP). The reports submitted only to DOE-LAAO will be submitted based on the schedule documented in the ER Project Baseline dated September 30, 1998, or as amended and documented through a BCP.

Gradient:

Unsatisfactory:

- Submit to DOE completed NFA recommendations for fewer than 96 Workoff PRSs.

Marginal:

- Submit to DOE 128 completed NFA recommendations for Workoff PRSs.

Good:

- Submit to DOE (see Assumption 3) 160 completed NFA recommendations for Workoff PRSs.

Excellent:

- Submit to DOE 192 completed NFA recommendations for Workoff PRSs

Outstanding:

- Submit to DOE 224 completed NFA recommendations for Workoff PRSs.

LANL's performance exceeded the threshold for Excellent performance that consisted of a minimum of 192 NFAs with a total of 202 NFA recommendations on workoff sites. Five documents were submitted addressing 202 NFA recommendations on workoff sites, and accepted by DOE.

1.1.c ***Progress In Characterization: Canyons Fieldwork And Planning.***
(Weight = 10% Earned = 7.5%)

DOE Rating: Good – 75%

Assumptions:

- *Credit for completion of the reaches reports will be obtained when the final reaches report(s) is (are) submitted to and accepted by DOE–LAAO. Credit for the first phase of sampling will be considered when the sampling is started and a memorandum documenting the start date is transmitted to DOE–LAAO. Credit for installation of the alluvial aquifer wells will be considered when the wells are completed and a well completion report has been submitted to and accepted by DOE–LAAO. Credit for completion of the deep wells will be obtained when a well completion report [or interim well completion report if the well is not to be completed, upon approval by the Groundwater Integration Team (GIT)] has been submitted to and accepted by (following General Assumption 6) DOE–LAAO.*

Gradient:

Unsatisfactory:

- Perform less than the requirements identified to achieve a rating of "marginal."

Marginal:

- Conduct first phase sampling in 2 new reaches. Submit reports for 2 canyon reaches to DOE–LAAO and complete installation of 2 alluvial aquifer wells.

Good:

- Conduct first phase sampling in 4 new reaches. Submit reports for 4 canyon reaches to DOE–LAAO. Complete installation of 4 alluvial aquifer wells, and complete the drilling of deep wells R–9 and R–

15. Submit R-15 Interim Report, Alluvial Wells report, and R–9 Final Completion Report to DOE–LAAO by 9/16/99.

Excellent:

- Conduct first phase sampling on 6 new reaches. Submit reports for 4 canyon reaches to DOE–LAAO. Complete installation of 6 alluvial aquifer wells, and complete drilling deep wells R–9 and R–15. Submit R–15 Interim report to DOE–LAAO by 8/17/99. Submit Alluvial Wells report and R–9 Final Completion report to DOE–LAAO by 9/16/99.

Outstanding:

- Conduct first phase sampling on 8 new reaches. Submit reports for 6 canyon reaches to DOE–LAAO. Complete installation of 8 alluvial aquifer wells and complete drilling deep wells R–9 and R–15. Submit R–15 Interim report to DOE-LAAO by 7/17/99. Submit Alluvial Wells report and R–9 Final Completion report to DOE–LAAO by 9/16/99. Submit Sandia Canyon Work Plan to DOE-LAAO by 9/16/99.

LANL completed all of the requirements for the Good level of performance except for the drilling of deep well R-9. The completion report for R-9 was submitted on October 20, 1999. The Sandia Canyon Work Plan was submitted toward partial completion of the Outstanding level. DOE provided formal acceptance for all of the documents. Although the well was completed soon after the deadline and one component of Outstanding was achieved, DOE considers the installation of deep wells a high priority project with significant interest by DOE stakeholders, and emphasizes the importance of meeting documented commitments to the regulator. Therefore, performance measure is rated at the Good level.

1.2 ***MEETS REGULATORY REQUIREMENTS AND OTHER EXPECTATIONS.***
(Weight = 10% Earned = 8.2%)

1.2.a ***Material Disposal Area MDA-P Closure*** **(Weight = 10% Earned = 8.2%)**

DOE Rating: Excellent – 82%

Assumptions:

- *Phase I fieldwork is complete when debris removal is visually confirmed and all soil that has been determined by the field screening to be above targeted levels of contamination is removed. Sample analysis for Phase I is complete when the data is of sufficient quality to make a decision. The conclusion that data is of sufficient quality will be documented in a memorandum to the MDA–P team leader. Completion of Phase II fieldwork is confirmed when sample results demonstrate that preliminary remediation goals have been achieved. These completions will be documented by the submittal of a report or reports to DOE–LAAO by September 1, 1999. DOE–LAAO's acceptance of reports follows General Assumption 6.*
- *LANL programmatic decisions [e.g., Engineering Science and Applications Division-Weapons, Materials, and Manufacturing (ESA–WMM)] and decisions of the operating group may impact this performance measure. MDA–P schedules will be adjusted to reflect delays caused by any work stoppages directed by organizations that are external to the ER Project (e.g. ESA Division). Similarly, schedules will be adjusted if work is impeded by safety concerns or by the presence of threatened and endangered species.*
- *The approved Closure Plan for MDA–P currently commits to completion of Phases I and II field work and sample analysis in FY99. It is assumed that the Closure Plan will be modified with NMED approval to require only the completion of Phase I field work and sample analysis in FY99.*

Gradients:

Unsatisfactory:

- Fieldwork on Phase I not completed.

Marginal:

- Complete Phase I fieldwork but not sample analysis in FY99.

Good:

- Complete Phase I fieldwork and sample analysis in FY99.

Excellent:

- Complete Phase I fieldwork and sample analysis and start fieldwork on Phase II in FY99.

Outstanding:

- Complete Phase I fieldwork and sample analysis and complete Phase II fieldwork in FY99.

Work is at the Excellent level. Three documents were provided to DOE: (1) a letter (EM/ER: 99-188) submitting a Sample and Analysis Plan, a VCA for 16-016C-99, and a Closure plan for 16-387 Flash Pad); (2) a letter documenting the completion of Good performance dated August 26, 1999 (EM/ER: 99-233); and (3) a letter documenting completion of the Excellent level of performance (EM/ER: 99-245), (i.e., removal of 16,000 cubic yards of soil and debris). Requirements were clarified by a joint DOE/LANL letter (EM/ER: 99-215) to describe the use of a volumetric removal basis for performance as equivalent to the phased approach described in the gradient for this measure. Additional clarification was provided in EM/ER:99-275. DOE accepted those documents requiring acceptance. LANL is to be commended on the manner in which significant safety issues were addressed in the execution of this work.

1.3 REDUCING POTENTIALLY ADVERSE ENVIRONMENTAL IMPACTS (Weight = 5% Earned = 4.35%)

1.3.a *Interim Measure (IM) and Best Management Practice (BMP) Field Maintenance.* (Weight = 5% Earned = 4.35%)

DOE Rating: Excellent - 87%

Assumptions:

- *The draft policy/guidance document on Best Management Practice (BMPs) shall provide information on the inspection and appropriate maintenance of BMPs to control the migration of potential pollutants to surface water. The policy/guidance document shall provide a consistent approach in the inspection and appropriate maintenance of BMPs at ER Project PRSs.*
- *DOE–LAAO and LANL will define by January 30,1999: (a) the list of BMPs required to be installed in FY99 associated with the activities identified in the approved baseline; and (b) the list of BMPs required to be maintained in FY99. These lists will include the date for installation and schedule for maintenance, as appropriate. The lists will be updated by mutual agreement between DOE–LAAO and LANL, with necessary changes to the baseline, as necessary.*
- *IMs required under the performance measure are those IMs, if any, required by NMED to be implemented in during FY99.*

Gradient:

Unsatisfactory:

- Install and maintain less than 85% of BMPs/100% of IMs as required on time and submit semi–annual reports to DOE–LAAO demonstrating the integrity of all existing BMPs/IMs.

FUNCTIONAL AREA: ER/WM

Marginal:
- Install and maintain 85% of BMPs/100% of IMs as required on time and submit semi–annual reports to DOE–LAAO demonstrating the integrity of all existing BMPs/IMs.

Good:
- Install and maintain 90% of BMPs/100% of IMs as required on time and submit semi–annual reports to DOE–LAAO demonstrating the integrity of all existing BMPs/IMs.

Excellent:
- Install and maintain 95% of BMPs/100%of IMs as required on time and submit semi–annual reports to DOE–LAAO demonstrating the integrity of all existing BMPs/IMs.

Outstanding:
- Install and maintain 100% of BMPs and IMs as required on time and submit semi–annual reports demonstrating the integrity of all existing BMPs/IMs. Submit annual report demonstrating the integrity of all site restorations from PRS remediations and D&D operations to DOE–LAAO.

Requirements for Excellent performance were completed and accepted by DOE. Five documents were provided to DOE: (1) a letter documenting a list of IMs/BMPs to be installed and maintained (provided January 29, 1999 (EM/ER: 99-022) and updated March 29, 1999 (EM/ER: 99-064); (2) a policy on BMP inspection and maintenance (provided with EM/ER: 99-064); (3) a semiannual report demonstrating integrity of all BMPs on March 31, 1999 (EM/ER: 99-065); (4) a letter documenting changes to the maintenance schedule (EM/ER: 99-209, August 11, 1999); and (5) a final semiannual report demonstrating integrity of all BMPs.

1.4 *MINIMIZING TOTAL LIFE CYCLE PROJECT COSTS* (Weight = 35% Earned = 26.75%)

DOE Rating: Good - 77%

1.4.a *Management and Technical Support Cost* (Weight = 5% Earned = 3.9%)

DOE Rating: Good - 78%

Assumptions:
- *UC will use the sub–elements of the DOE/AL Work Breakdown Structure Dictionary for management and technical costs including the nonstandard activities. The costs will be based on actual data in the UC/LANL Financial Management Information System as reported in the Project Tracking System as of November 18, 1999.*
- *Costs are based on scope in the January Financial Plan. Any additions to scope may require revision to percentages shown within the performance levels.*

Gradients:

Unsatisfactory:
- UC/LANL ER Project Management and Technical Support costs exceed 35%, respectively, of the total budget.

Marginal:
- UC/LANL ER Project Management and Technical Support costs are less than or equal to 32%, respectively, of the total budget.

Good:
- UC/LANL ER Project Management and Technical Support costs are less than or equal to 30%, respectively, of the total budget.

Excellent:

- UC/LANL ER Project Management and Technical Support costs are less than or equal to 27%, respectively, of the total budget.

Outstanding:

- UC/LANL ER Project Management and Technical Support costs are less than or equal to 25%, respectively, of the total budget.

The ER Project ended the year at 27.2% for management and technical support costs at the Good level.

1.4.b *ER Project Cost Variance* (Weight = 5% Earned = 4.1%)

DOE Rating: Excellent - 82%

Assumptions:

- *The end–of–year variance will be the sum of the ER project costs incurred in FY99. Cumulative cost variance is reported in the PTS report for September 1999. The emergency BCP process will be used when appropriate to ensure planned activities are included in the baseline. Cost variance is defined by the equation: cv = (bcwp–acwp)/bcwp, where cv = cost variance, bcwp = budgeted cost of work performed, and acwp = actual cost of work performed.*

Gradient:

Unsatisfactory:

- Cumulative end–of–year variance is less than –6%.

Marginal:

- Cumulative end–of–year variance is between –3% and –6%.

Good:

- Cumulative end–of–year variance is between –3% and zero.

Excellent:

- Cumulative end–of–year variance is between zero and +3%.

Outstanding:

- Cumulative end–of–year variance is greater than +3%.

Cumulative cost variance for the ER Project was 0.0%. That variance is in the excellent range of zero to +3%.

1.4.c *Baseline Validation* (Weight = 25% Earned = 18.75%)

DOE Rating: Good - 75%

Assumptions:

- *The LANL ER project life–cycle–baseline will be submitted to DOE by August 31, 1999. The LANL ER life–cycle–baseline will lead to a DOE-approved baseline, which can be validated for FY00 and FY01 execution, effective date of October 30, 1999.*
- *The ER project baseline shall be revised based on the DOE baseline requirement document dated February 5, 1999.*
- *DOE shall provide a score by September 30, 1999 for use in the year–end and special assessment reports and shall document the basis for the score. The score will be updated following DOE validation and the year–end and special assessment reports will be modified after September 30, 1999 to reflect the final score.*

Gradient:

FUNCTIONAL AREA: ER/WM

Marginal/Unsatisfactory:
- Baseline is not validated: Score = 0.

Good:
- Baseline is conditionally validated: Score = 75.

Excellent/Outstanding:
- Baseline is validated: Score = 100.

Baseline documents (an eleven-volume set) were provided on schedule to DOE on August 31, 1999. A number of intermediate documents not explicitly required by the performance measure (but required by the Baseline Action Plan) and important in demonstrating progress were also provided. Upon review, DOE determined there were issues significant enough to prevent validation of the Baseline as submitted. These significant issues are related, for example, to the following significant baseline review findings: (1) the baseline was not escalated according to DOE guidance; (2) the contingency analysis was inconsistent with DOE guidance; (3) long term surveillance and maintenance costs were based on faulty assumptions, and therefore were overestimated by approximately 75%; (4) no critical path was identified, as required by DOE guidance; and (5) technical logic was inconsistent for some of the major Material Disposal Areas. DOE does not see these as being major obstacles and the Baseline is being scored as conditionally validated which corresponds to a score of 75.

Performance Objective #2	**Good - 79%**

EFFECTIVE AND COST-EFFICIENT ER PROGRAM – OUT YEARS: *To maximally promote and facilitate ER Objectives in future years, an effective ER program will expeditiously and cost-effectively remediate contaminated sites in a manner that is protective of worker and public health and the environment and consistent with mutually agreed upon priorities based on funding levels.* **(Weight = 20% Earned = 15.7%)**

DOE Rating: Good - 79%

2.1 ***NEGOTIATE REGULATORY AGREEMENTS AND INSTITUTIONAL CHANGES THAT FACILITATE SUCCESS*** **(Weight = 10% Earned = 8.2%)**

2.1.a ***Integrated Technical Strategy Plan*** **(Weight = 10% Earned = 8.2%)**

DOE Rating: Excellent - 82%

Assumptions:
- *An Integrated Technical Strategy Plan will establish the technical strategy for completion of ER sites. The Plan will include criteria and decision logic used to support a decision of no further action or final action for a site or within aggregates. The Integrated Technical Strategy Plan will integrate human health, ecological, surface water, and ground water criteria, will include aggregation criteria, and will be integrated with the Canyons Core Document and the MDA Core Document, the Watershed Management Plan and the Hydrogeologic Workplan.*
- *Development of the Plan will facilitate negotiations with the Administrative Authorities on what criteria will be used to determine when an ER site is completed. The ER Project's ability to obtain NFA for future sites (Performance Measure A.1.1) will depend on the development of an integrated set of technical assumptions. Completion of the Integrated Technical Strategy Plan by June 30, 1999 will allow the criteria to be used in the late FY99 field season and to guide data collection and*

to support no further action or final action proposals. Development and use of the Integrated Technical Strategy Plan will become the technical basis upon which prioritization of future ER work will depend.

- *The Integrated Technical Strategy Plan shall be designed to become a Quality Procedure for the ER Project. It will be supported by technical documentation as well as ER policies. The technical component documents to be developed in support of the Integrated Technical Strategy Plan include:*
    1. *Standard human health risk assessment scenarios;*
    2. *Document of draft General Assessment Endpoints (GAEs) for Baseline Ecological Risk Assessments, the process for developing GAEs, and the integration of the eco-risk approach with NRDA;*
    3. *Document describing process for developing assessment and measurement endpoints based on General Assessment Endpoints for ecological risk assessment, including case studies (260 out fall area, Upper Sandia Canyon, another aggregate);*
    4. *Scoring database submitted as an electronic deliverable;*
    5. *Criteria for cumulative risk assessments; and*
    6. *Integrated Data Sets for Modeling.*
    7. *External acceptance or approval of the technical components defined above is neither anticipated nor required prior to submittal of the "Integrated Technical Strategy Plan."*
- *The Integrated Technical Strategy Plan will be utilized in preparing the Fiscal Year 2000 Baseline such that the strategy is embedded in the baseline.*

Gradient:

Unsatisfactory:

- Submit "Integrated Technical Strategy Plan" to DOE–LAAO after July 31, 1999.

Marginal:

- Submit "Integrated Technical Strategy Plan" to DOE–LAAO by July 31, 1999.

Good:

- Submit "Integrated Technical Strategy Plan" to DOE–LAAO by June 30, 1999 and two technical component documents by September 1, 1999.

Excellent:

- Submit "Integrated Technical Strategy Plan" to DOE–LAAO by June 30, 1999 and submit 4 technical component documents (of the list in Assumption 4 below) in support of the Plan by September 1, 1999.

Outstanding:

- Submit "Integrated Technical Strategy Plan" to DOE–LAAO by June 30, 1999, submit 6 technical component documents (of the list in Assumption 4 below) in support of the plan by September 1, 1999, and integrated SAP to DOE–LAAO for TA–35 by September 30, 1999.

All work required for the Excellent level was provided to and accepted by DOE. A total of five documents were submitted: the revised Integrated Technical Strategy Plan, and four technical component documents (a) standard human health risk assessment scenarios, (b) the scoring data base, (c) the general assessment endpoints, and (d) the integrated data sets. The Integrated Technical Strategy Plan was initially submitted to DOE on July 2, 1999. Upon review, DOE determined that the document contained substantial errors and omissions. DOE provided numerous comments on the document on July 30, 1999, and subsequently worked with the Laboratory diligently to develop the revised document, which was accepted by DOE.

FUNCTIONAL AREA: ER/WM

2.2 DEVELOPING AND IMPLEMENTING SOUND PLANNING AND PRIORITIZATION PROCESSES (Weight = 10% Earned = 7.4%)

DOE Rating: Good - 74%

2.2.a *Material Disposal Areas (MDAs) Planning and Prioritization for RFI/CMSs.* (Weight = 5% Earned = 3.6%)

DOE Rating: Good - 72%

Assumptions:

- *This performance measure is an indicator of the degree to which ER is developing and implementing sound planning and prioritization processes. The MDA Core Document is a tool developed explicitly for planning and prioritizing the RFI/CMS process for LANL MDA's. This performance measure contributes to DOE Objective 3, Strategy 6, "Strengthen the management of projects, materials, facilities, land, infrastructure and other assets, to ensure safe, sound, and cost-effective, operations, appropriate maintenance of sites, and to ensure intended projects results" (DOE/PO0053, pp.40).*
- *The MDA Core Document will follow the format and content specified by DOE in their memorandum of March 11, 1999 (LAAO: E:T:TJT:MDA-CORE:1.4.2.6.3.3.15), with modifications and clarifications discussed with DOE on April 1, 1999. Decision logic discussed in the MDA Core Document will include documentation of the testing and validation process, as demonstrated in the application of quantitative decision rules.*
- *Completion of the decision analysis within the MDA corrective action strategy (Chapter 5 of the MDA Core Document) means that: 1) the MDA G radiological risk assessment will be extended to include non-radiological constituents in the MDA G inventory; and 2) quantitative decision rules will be developed for determining the applicability of the MDA G a risk analysis to other MDAs based upon the relative degree of confidence in important data and parameters. Application of the decision analysis at MDAs G, H, and L will result in: 1) the identification of additional data or modeling needs, 2) the proposal of a final remedy, or 3) the proposal for no further action. Application of the decision analysis at other MDAs will be used in prioritizing corrective actions at other MDAs, which will be reflected in the baseline for FY00. Note that the decision analysis will not be applied at MDA J. MDA J will be closed in 1999 as a commercial and special waste landfill under New Mexico Solid Waste regulations, 20 NMAC 9.1, Subpart V; once closed, it will be removed from the HSWA permit.*
- *The RFI report will include material describing implementation of the decision logic at MDA G.*

Gradient:

Unsatisfactory:

- Do not complete requirements for "marginal" by September 30, 1999.

Marginal:

- Submit MDA Core Document, including the completed decision logic, to DOE by September 1, 1999. Implement the decision logic at MDA G as documented in a peer-reviewed internal technical report submitted to DOE-LAAO by September 1, 1999.

Good:

- Submit MDA Core Document to DOE by August 15, 1999. Apply the MDA Corrective Action Strategy at MDAs G, H, and L as in the multi-media RFI report for TA-54, submitted to DOE-LAAO by September 30, 1999.

Excellent:

- Perform adequately to achieve a rating of “good,” plus apply the MDA Corrective Action Strategy decision logic at MDA AB as documented in a Status Report for Area 2, submitted to DOE-LAAO by

September 30, 1999.

Outstanding:

- Perform adequately to achieve a rating of "excellent," plus submit the MDA AB status report for Area 2 by August 30, 1999.

All deliverables required for Good performance were submitted to DOE. Four documents were provided to DOE: (1) a table of contents for the MDA Core document, (2) the MDA Core Document, (3) the Multimedia RFI Report for TA-54 documenting application of the decision logic at MDAs G, H, and L, and (4) the TA-54 RFI Report. The performance measure was revised on April 21, 1999 (letter to Baca and Gurulé, EM/ER: 99-076). DOE accepted all documents. The score is based upon a preliminary review.

2.2.b *Integrated Modeling Approach* (Weight = 5% Earned – 3.8%)

DOE Rating: Good - 75%

Assumptions:

- *As a result of modeling, characterization or remediation, uncertainties are reduced. Application of the integrated modeling approach will be considered complete when focus area decision teams receive modeling results. Implementation of integrated modeling will be considered complete when modeling results are documented to guide FY00 baseline planning. In particular, modeling will be used in support of decision making in Canyons for siting/prioritizing of boreholes, in MDAs for data-needs refinement for further characterization, and in remedial actions for characterization planning or remedy selection. Results will be documented in a memorandum to support FY00 baseline assumptions and resources. Specific sites for modeling application are dependent on FY99 baseline activities scheduled.*
- *Integrated modeling requires PRS-scale models to feed into site–wide modeling as source terms. LANL regional model parameters and PRS source term data must be in place.*
- *A list of bounding contaminants (bounding velocity, toxicity, and persistence) to be addressed in meeting requirements for the excellent level of performance will be documented and submitted to DOE–LAAO for review and approval.*

Gradient:

Unsatisfactory:

- Do not complete requirements defined for "marginal" by September 30, 1999.

Marginal:

- Prepare an initial version of the Site–Wide Atlas, formulate a geologic model for Los Alamos Canyon, construct a model grid, and calibrate numerical flow model parameters and results to DOE–LAAO by September 1, 1999.

Good:

- Prepare an initial version of the Site–Wide Atlas, formulate a geologic model for Los Alamos Canyon, construct a model grid, calibrate a numerical flow model, calibrate a numerical transport model for tritium, and document input to siting of characterization borehole and decisions regarding which water-bearing zones to monitor. Submit initial version of Site–Wide Atlas, submit letter-report summarizing model parameters and results, and document integration of deep–well data and modeling to DOE–LAAO by September 1, 1999.

Excellent:

- Prepare an initial version of the Site–Wide Atlas, formulate a geologic model for Los Alamos Canyon, construct a model grid, calibrate a numerical flow model, calibrate a numerical transport

model for tritium and bounding contaminants, and document input to siting of characterization borehole and decisions regarding which water-bearing zones to monitor. Submit initial version of Site–Wide Atlas, submit letter–report summarizing model parameters and results, and document integration of deep–well data and modeling to DOE–LAAO by September 1, 1999.

Outstanding:

- Prepare an initial version of the Site–Wide Atlas, formulate a geologic model for Los Alamos Canyon, construct a model grid, calibrate a numerical flow model, calibrate a numerical transport model for tritium and bounding contaminants, and document input to siting of characterization borehole and decisions regarding which water-bearing zones to monitor. Model contaminant flow and transport at TA–49. Submit the initial version of Site-Wide Atlas, submit letter-report summarizing model parameters and results for Los Alamos Canyon and TA–49, and document integration of deep–well data and modeling in Canyons and MDAs to DOE–LAAO by September 1, 1999.

All deliverables required for Good performance were submitted to DOE. Six documents were provided to DOE: (1) Example of Maps for the Otowi Member, (2) Table of Contents for Site-Wide Atlas, (3) an Annotated Outline for "Flow and Transport Model in Los Alamos Canyon", (4) Site-Wide Atlas "Maps," (5) a letter-report (Flow and Transport Calculations in Los Alamos Canyon), and (6) a letter to DOE documenting a recommendation to the Groundwater Integration Team (GIT) on "Siting and Prioritization of Regional Ground Water Wells." DOE approved all documents.

Performance Objective #3	**Excellent - 81%**

EFFECTIVE AND COST-EFFICIENT WM PROGRAM: The performance objective for waste management states that LANL will conduct waste management operations in an expeditious and cost-effective manner, preventing adverse impacts on human health, the environment and the public. **(Weight = 95% Earned – 81.3%)**

DOE Rating: Excellent - 81%

The following performance ratings reflect the assessment of the University of California's (UC) work completed toward the preceding contractual performance measures. Each rating reflects UC's progress toward the baseline funded work. Overall, LANL rated at an 85% which includes extra credit in certain Functional Areas for effort above the baseline activities. However, since UC completed the first shipment to the Waste Isolation Pilot Plant (WIPP), an integral component to the Department of Energy's plans to clean up nuclear waste, the UC rating will be raised an additional 4%. This brings the total for UC to 89% for FY999.

3.1 COST EFFECTIVENESS (Weight = 15% Earned = 12.9%)

3.1.a Cost Effectiveness (Weight = 15% Earned = 12.9%)

DOE Rating: Excellent - 86%

Assumptions:

- *Funding of $42,127K for waste management activities is received from DP-10 and $17,127K for legacy waste activities is received from EM-30.*
- *The FY99 Waste Management Work Plan or equivalent work scope will be performed or dollars for*

uncompleted work scope will be discounted from the analysis of cost reductions.

- *Savings will be carried over to FY00 or applied to additional work scope for the appropriate DP or EM programs. DOE requirements for approval of baseline changes for waste management will be observed.*
- *Make/Buy analyses for waste management activities will not be required during FY99.*

Gradient:

Marginal:

- Less than "Good" performance.

Good:

- Achieve actual costs as projected in the FY99 Work Plan.

Excellent:

- Achieve "Good" performance, and evaluate potential TRU waste management cost savings by June 30, 1999.

Outstanding:

- Achieve "Excellent" performance, and demonstrate actual costs 4% below baseline.

The UC WM program office maintained program management costs below the FY99 Work Plan. This reflected a 21% reduction from FY98. Some WM work activities were rebaselined to achieve a cost reduction of 4%, but the contractor did not succeed in applying this across the entire program. The overall cost reduction was 3.7%. Cost savings were applied to additional value-added work beyond the scope of the approved work plan, including TRU waste repackaging and loading activities, and support to hazardous waste avoidance.

WIPP is an important component in the Department's plan to clean-up waste throughout the complex and UC was instrumental in opening WIPP. UC was instrumental in preparing a comprehensive quality assurance and technical program for characterizing and certifying TRU waste to be sent to WIPP. As a result, LANL was the first to ship to WIPP. In FY99, UC sent a total of 17 shipments to WIPP that was additional scope above its program baseline. Additionally, UC submitted a TRU waste cost evaluation to the DOE on June, 30, 1999, for an Excellent grade.

3.2 MIXED LOW-LEVEL WASTE (MLLW) WORK-OFF AND NEW MISSION WASTE TREATMENT: *This criterion monitors performance of treating LANL Site Treatment Plan (STP) MLLW and the accompanying transition to treating newly generated MLLW within the regulatory required time frames to avoid inclusion in the LANL STP. The schedule for work-off of STP waste and newly generated MLLW is based on the actual levels of funding received and current costs for completing the DOE approved MLLW work scope.* **(Weight = 15% Earned = 15%)**

3.2.a ***Legacy Waste Work-Off*****:** *This measure monitors performance of reporting, treating and disposing of MLLW within the regulatory required time frames. The schedule for the work-off of STP waste is based on compliance schedules, and prioritization based on characteristic waste types available and then other waste types, and fiscal-year funding levels received.* **(Weight = 10% Earned = 10%)**

DOE Rating: Outstanding - 100%

Assumptions:

FUNCTIONAL AREA: ER/WM

- *Funding for the MLLW Program of $3,946K is received from EM-30.*
- *The required MLLW treatment and disposal capabilities are available to LANL.*

Gradient:
Marginal:
- Less than "Good" performance.

Good:
- Submit an annual update of Site Treatment Plan to the New Mexico Environment Department (NMED) by March 31, 1999. Complete the treatment and disposal of 79 cubic meters (m3) of legacy MLLW by September 30, 1999. LANL will submit a detailed volume inventory of the "Legacy" MLLW generated through September 30, 1998, by October 31, 1998 to LAAO.

Excellent:
- Complete "Good" and treat and dispose of an additional 11m3 of legacy MLLW.

Outstanding:
- Complete "Excellent" and treat and dispose of an additional 10m3 of legacy MLLW.

By every objective measure, UC exceeded expectations in the area of MLLW Workoff. The contractor met performance measures including reporting requirements and legacy waste Workoff. UC shipped 106.43 m3, which exceeds the Outstanding performance measure of shipping 100 m3. With additional funding, the contractor shipped a grand total of 149 m3 of MLLW offsite for treatment and disposal in FY99, for an Outstanding grade.

3.2.b ***Newly Generated Mission Waste Treatment and Disposal:*** *This measure monitors performance of treating and disposing of new mission-generated MLLW within the required regulatory time frames to avoid inclusion in the LANL STP. The work-off of newly generated waste is based on treatment and disposal within one year. It is LANL's responsibility to manage all operations in compliance with applicable laws and regulations.* **(Weight = 5% Earned = 5%)**

DOE Rating: Outstanding - 100%

Assumptions:
- *Funding for the MLLW Program of $3,828K is received from DP-10.*
- *The required treatment and disposal capabilities remain open to LANL.*
- *The ER/D&D projects will fund the brokerage, characterization, transportation, treatment and disposal of all MLLW that it generates.*
- *Newly generated waste is waste that is generated after September 30, 1998.*

Gradient:
Marginal:
- Less than a "Good" performance.

Good:
- LANL will complete and submit all necessary reports and notifications on a timely basis and obtain any required approvals to facilitate the shipment, treatment and disposal of newly generated mission wastes. New MLLW, which lacks a treatment and disposal path, will not be generated without the appropriate DOE approval, in accordance with DOE's October 5, 1998 guidance. No newly generated MLLW will be added to LANL's STP without appropriate DOE approval. LANL will manage the Environmental Restoration (ER) and decommissioning and demolition (D&D) project MLLW to through put, and facilitate shipping, treating and disposal of ER/D&D MLLW, in addition to routine operational MLLW.

Excellent:

- In addition to accomplishing "Good" performance, LANL will implement a program to avoid MLLW generation at the source, and obtain earlier and improved characterization data from generators, by September 30, 1999.

Outstanding:

- In addition to accomplishing "Excellent" performance, LANL will demonstrate that the waste avoidance/characterization plan is effective in reducing two MLLW stream volumes by September 30, 1999.

UC met or exceeded the requirements of Outstanding performance. All reporting was completed as required. No new MLLW was added to the STP. All MLLW stemming from ER and D&D projects was successfully managed. A MLLW Program Plan was established in April 1999 and is used to assist MLLW generators in avoiding MLLW generation and to induce improved waste characterization data. UC's program plan specifies 20 waste streams where waste minimization efforts have been successful, for an Outstanding grade.

3.3 TRANSURANIC (TRU) WASTE CERTIFICATION AND PROCESSING: *This criterion tracks performance of LANL's implementing its TRU Waste Program to: (1) work through existing TRU waste in storage; (2) certify new mission waste and prepare TRU waste shipments meeting the National TRU Program's schedule; and (3) monitor activities related to accepting and storing TRU waste at Area G.* **(Weight = 15% Earned = 12.5%)**

DOE Rating: Excellent – 83%

3.3.a *TRU Waste Certification* (Weight = 10% Earned = 8.3%)

DOE Rating: Excellent - 83%

Assumptions:

- *"Road ready" means the TRU waste has been characterized, packaged, and certified so that WIPP Waste Information System data entry is completed.*
- *Funding for TRU waste characterization and certification, not including facility management, of $7,078K is received from DOE DP-10 and $3,718K is received from DOE EM-30.*
- *Newly generated TRU waste may include either mixed and/or non-mixed waste, and certification of mixed TRU waste as "road ready" will satisfy this measure.*
- *The DOE will provide TRUPACT II containers on a timely basis as needed for shipment of TRU waste, and will provide transportation of the TRU waste from LANL to the WIPP site. If DOE does not provide TRUPACT II containers on a timely basis, or provide transportation of the TRU waste from LANL to the WIPP site, certification of waste as "road ready" will satisfy this performance measure.*
- *These measures will be re-negotiated if the NMED does not approve the proposed LAAO/LANL revisions to the MTRU milestones in the LANL STP for mixed waste.*

Gradient:

Marginal:

- Less than "Good" performance.

Good:

- Achieve certification authority for homogeneous TRU waste from DOE's Carlsbad Area Office (CAO). Receive approval from DOE CAO for use of hydrogen gas generation measurements in certification of LANL TRU waste. By November 30, 1998, complete characterizing all TRU debris

waste retrieved from Pad 1 of the Transuranic Waste Inspectable Storage Project (TWISP) to meet requirements of the Waste Analysis Plan (WAP) approved by the NMED. Within 120 days of receipt of certification authority for homogeneous waste, complete characterization of all TRU homogeneous waste from Pad 1 of the TWISP to meet requirements of the WAP approved by the NMED. All newly generated TRU waste must be WIPP certifiable or the proper DOE management approvals must be obtained to generate this waste.

Excellent:

- In addition to "Good", by September 30, 1999, characterize and certify 33.5m3 of newly generated TRU waste as "road ready" for shipment to WIPP.

Outstanding:

- In addition to "Good", by September 30, 1999, characterize and certify 67m3 of newly generated TRU waste as "road ready" for shipment to WIPP.

Several performance requirements were contingent on homogeneous TRU waste certification authority being granted by DOE's Carlsbad Area Office (CAO). Owing to unexpected regulatory requirements, CAO postponed its certification audit at LANL beyond FY99 until the full impact of the WIPP RCRA Part B permit can be assessed. This schedule change was beyond UC's control. Although UC was not able to achieve certification authority for homogeneous TRU waste, UC met all the testing requirements to obtain CAO certification of its homogenous program. UC received approval from DOE/CAO for use of hydrogen gas generation measurements in certifying TRU waste. UC did not meet the requirement to characterize all TWISP Pad No. 1 debris drums. Approximately 100 of these drums were placed in overpacks, and thus did not meet the safety requirements of the characterization equipment and facility. The contractor made up for this shortcoming by characterizing 1,084 TRU debris drums from TWISP Pad. No. 4. The contractor's approach to exceeding Good performance involved characterizing and certifying all newly generated TRU waste. Of approximately 56 cubic meters of new TRU waste, only 18.5 cubic meters met the holding requirements to start the certification process. UC completed certification for the entire 18.5 cubic meters, meeting the spirit of the performance measure. The contractor also completed certification, repackaging, and loading operations for 17 shipments for TRU waste to WIPP, beyond the scope of this performance measure. These accomplishments demonstrate an Excellent grade.

3.3.b ***TRU Waste Processing*** **(Weight = 3% Earned = 2.3%)**

DOE Rating: Good - 75%

Assumptions:

- *LANL will evaluate the need for an additional storage and provide justification to DOE if it determines that a dome is necessary. The evaluation will include condition of containers, permitting requirements, available space in existing domes, and projected TRU waste retrieval rates.*
- *LANL will have completed all of the necessary NEPA requirements for completing upgrades and operating the Decontamination and Volume Reduction Systems (DVRS) and LSDDP facilities.*
- *Funding of $1,500K for the LSDDP is received from DOE EM-50 (includes FY98 and FY99 funding).*
- *Facility and electrical needs for the LSDDP are fully defined by January 1, 1999.*
- *Funding of $5,000K for the ASTD project is received from DOE EM-50.*
- *Funding of $1,250K for the TRU waste Sort, Segregate, and Repackage project is received from DOE EM-30 in FY99.*
- *Funding of $1,306K is received from DP 10.*
- *Funding of $643K is received from EM 30.*

FUNCTIONAL AREA: ER/WM

Gradient:

Marginal:

- Less than "Good" performance.

Good:

- Complete all electrical upgrades necessary to support operating the Accelerated Site Technology Deployment (ASTD) project facility by September 30, 1999. Complete all NEPA requirements for DOE approval of an Environmental Assessment of the DVRS facility by January 31, 1999.

Excellent:

- In addition to a level of "Good" performance, complete all facility modifications necessary to support the Large Scale Demonstration Deployment Project (LSDDP). Complete construction of and obtain all equipment necessary to operate the ASTD facility.

Outstanding:

- Begin assay of oversized metallic waste in preparation for the ASTD facility. Complete construction of and obtain all equipment necessary to operate the ASTD facility by July 31, 1999. Achieve DOE operational status for the DVRS facility by September 30, 1999.

Note: Postponement of this construction milestone is related to relocation of the DVRS engineered confinement system for Dome 226 to a 2-hour fire-rated building. Service upgrades (including electrical) for the fire-rated building will be completed in FY99 as part of the DVRS deployment, and carry no direct schedule impact to the DVRS initiative. Relocation of the DVRS work area is beneficial to DOE because it allows Dome 226 to be immediately prioritized for TRU waste storage that will support continued TWISP Pad 4 retrieval operations and alleviate the need for an additional dome structure at this time.

These criteria were established after the middle of the fiscal year, only after safety reviews indicated the need to plan these activities in more robust facilities. The NEPA documentation requirements were met. UC was unable to complete certain construction milestones owing to requirements to convert funding being used to complete the work. The following items were completed in support of the LSDDP: (1) Installation of the Large Item Neutron Counter (LINC) system in Dome 153, (2) Modifications complete for Air Pallet Demonstration, (3) Modifications complete for Vehicle and Cargo Inspection System (VACIS) Imaging Demonstration, and (4) Activities related Electrical Upgrades for DVRS. In spite of the construction milestone shortcomings, the facility upgrades, permitting, and approvals necessary to support the LSDDP were completed. UC did not meet the necessary requirements to achieve a level of Excellent or Outstanding, therefore, the rating is Good.

3.3.c *TRU Waste Storage* (Weight = 2% Earned = 1.9%)

DOE Rating: Outstanding - 95%

Assumptions:

- *Funding of $1306K is received from DP-10.*
- *Funding of $643K is received from EM-30.*

Gradient:

Good:

- Characterize 50 drum equivalents (drum equivalents equal to a 55 gallon drum) of TRU waste with analytical, equipment consistent with the requirements of the Low Level Waste Acceptance Criteria for disposal.
  Note: Current activities will be re-scoped to identify additional funds of $75K to complete this task.

FUNCTIONAL AREA: ER/WM

Excellent:

- Process paperwork for LLW identified which meets the LANL Waste Acceptance Criteria for LLW disposal.

Outstanding:

- Dispose of all LLW identified in this process which meets the LANL LLW WAC. Submit to DOE by August 1,1999, a plan that facilitates the screening of low level drums from TWISP and upstream generators in FY002000 to ensure that only TRU and/or mixed low level waste drums are placed in storage.

Sixty drum equivalents of suspect TRU waste were examined for recharacterization as LLW. Twenty-eight of the drums were recharacterized as LLW, and 18 drums were disposed of in Area G by the end of the fiscal year. This activity results in substantial TRU waste management cost savings and an Outstanding grade.

3.4 TWISP RETRIEVAL PROJECT (Weight = 10% Earned = 8.5%)

3.4.a ***TWISP Retrieval Project*** *The purpose of this measure is to monitor the progress in meeting the NMED schedule for retrieving TRU waste on Pads 1, 3 and 4 at Technical Area 54, Area G, by December 4, 2003*. **(Weight = 10% Earned = 8.5%)**

DOE Rating: Excellent - 85%

Assumptions:

- *Funding for the TWISP retrieval project, not including facility management, of $4,050K, is received from DOE EM-30.*
- *The physical configuration of Pad 4 will be similar to Pad 1, and LANL is not required to deal exclusively with drums nor boxes early in the Pad 4 retrieval phase of the project.*
- *The frequencies of inclement weather and winds exceeding 30 mph are not greater than FY98.*
- *The physical condition of the FRP boxes and drums in Pad 4 is not worse than those recovered from Pad 1.*
- *Damaged boxes or drums resulting in a breach will result in minimal removable contamination, and will not require extensive contamination control.*
- *The Drum Venting System (DVS) will operate in a reliable manner.*
- *Constructing a dome over Pad 4 will not be required by the DOE or the NMED.*

Gradient:

Marginal:

- Less than "Good" performance.

Good:

- Complete the retrieval of 3,300 drum equivalents from Pad 4. Additionally, LANL will vent 2,800 drums and place all retrieved/vented containers and boxes into inspectable storage by September 30, 1999.

Excellent:

- Complete a level of "Good" performance. Complete the retrieval of 3,700 drum equivalents from Pad 4. Complete the venting of 3,000 drums and place all retrieved/vented containers and boxes into inspectable storage by September 30, 1999.

Outstanding:

- Complete a level of "Excellent" performance. Complete retrieval of 4,250 drum equivalents from Pad 4. Complete the venting of 3,100 drums from Pad 4 and place all retrieved containers and boxes into inspectable storage by September 30, 1999.

UC retrieved a total of 3,408 drum equivalents and vented a total of 2,884 drums, which meets the Good performance measure. The physical condition of the drums and Fiberglass Reinforced Plywood (FRP) boxes were worse than those recovered from Pad 1. In addition, the poor physical condition of the drum and FRP boxes resulted in greater contamination control than anticipated. Despite the above adverse conditions, UC was able to perform retrieval/venting operations effectively and efficiently while maintaining safe operating conditions. This project is ahead of schedule and projected to result in substantial waste management cost savings and in an Excellent grade.

3.5 RADIOACTIVE LIQUID WASTE (Weight = 10% Earned = 4.4%)

3.5.a ***Radioactive Liquid Waste:*** *This measure monitors Radioactive Liquid Waste Treatment Facility (RLWTF) performance in accordance with safety and environmental requirements, and progress toward optimizing facility operations.* **(Weight = 10% Earned = 4.4%)**

DOE Rating: Unsatisfactory - 44%

Assumptions:

- *Funding for the operation of the RLWTF, including improvements and facility upgrade projects, is received from DP-10.*

Gradient:

Marginal:

- Less than a "Good" performance.

Good:

- Treat all radioactive liquid waste collected at the RLWTF in compliance with applicable facility safety/environmental regulatory requirements, including the DOE Derived Concentration Guides (DCG) and the Groundwater Discharge Plan submitted to the NMED. LANL will conduct the RLWTF treatment at the optimized cost for base operations of $6.340M, and an additional $4,353 for potential RLWTF system improvements, upgrades, and projects that will be negotiated with DOE by November 30, 1999. DCG compliance will be achieved by January 30, 1999 and nitrate limits in the Groundwater Discharge Plan will be achieved by March 16, 1999. A study will be completed to explore zero discharge at the RLWTF.

Excellent:

- In addition to a level of "Good," achieve nitrate compliance by February 28, 1999.

Outstanding:

- In addition to a level of "Excellent," achieve nitrate compliance by January 30, 1999, and begin implementing a zero-discharge strategy by September 30, 1999 (extent of implementation to be negotiated with DOE by November 30, 1999).

The UC rating for this Functional Area is 44% based on the following: non-compliance, safety issues, and cost-ineffectiveness. UC was unable to treat all radioactive liquid waste collected at the RLWTF in compliance with applicable facility safety/environmental

regulatory requirements and several UC commitments to the state have been missed over the past few years.

The RLWTF had ten NPEDS exceedances of which eight were repeats and accounted for 67% of all the NPDES exceedances at LANL. Although RLWTF met the nitrate limits in Groundwater Discharge Plan by March 16, 1999, the centralized nitrate approach funded at the beginning of the year was not implemented. UC achieved nitrate compliance by holding the nitrate waste upstream at the point of generation, trucking the nitrate waste to the RLWFT and impacting generator operations.

Upgrades to the plant to meet DCGs have been occurring over the past three years and have experienced numerous unnecessary schedule delays and cost overruns. RLWFT was not in compliance with DCGs as of January 30, 1999, due to UC's failure to plan for a Readiness Assessment (RA). The RA revealed that the DCG operations and the Radioactive Liquid Waste Facility itself, was operating outside of the Safety Authorization Basis and associated safety requirements for safe operations.

UC's lack of experience and knowledge of membrane operations, lack of pilot scale data of actual TA-50 wastewater, and UC's failure to operate the membrane equipment to the manufacturer's specifications, resulted in damage to the equipment and additional replacement costs. As of December 9, 1999 (almost a year later), UC still has not met DCGs.

Finally, the additional $4,353K for potential RLWTF system improvements, upgrades, and projects was not negotiated with DOE by November 30, 1999. The FY99 performance measure reflected an extension of time for UC into FY00 based on the fiscal year budget cycle and UC's need for specific budget information before negotiations could occur with DOE. This level of performance results in an unsatisfactory rating.

3.6 LOW-LEVEL WASTE (LLW) (Weight = 10% Earned = 8.5%)

3.6.a ***Low-Level Waste (LLW):*** *This measure monitors performance of LLW receipt and disposal operations, and measures being taken to verify that suspect LLW material is not contaminated and can be released for disposal as sanitary waste (Green is Clean).*
(Weight = 10% Earned = 8.5%)

DOE Rating: Excellent - 85%

Assumptions:

- *Funding for LLW disposal operations, not including facility management, of $2,285K is received from DOE DP-10.*
- *All activities related to authorization basis documents are in compliance.*
- *The Record of Decision (ROD) for the LANL Site Wide Environmental Impact Statement (SWEIS) is approved by January 10, 1999.*
- *Compactor maintenance schedules are sufficient and not exceeded.*

Gradient:

Marginal:

- Less than a "Good" level of performance.

Good:

- Revise and implement the WAC for LLW to incorporate FY99 changes to the Area G SAR within 120 days of DOE approval of the SAR. Operate the compactor and compact 50% of all compactable waste. Free release 100% of the paper waste sent to Area G and approved for release by the Green is Clean project. Release no LLW from the Area G Green is Clean project to sanitary or non-permitted landfills.

Excellent:

- Revise and implement the WAC for LLW to incorporate FY99 changes to the SAR within 90 days of DOE approval of the SAR. In addition to a level of "Good," compact an additional 25% of all compactable waste sent to Area G.

Outstanding:

- Revise and implement the WAC for LLW to incorporate FY99 changes to the Area G SAR within 60 days of DOE approval of the SAR.

Required revisions to the LLW waste acceptance criteria could not be completed because the Area G safety analysis report was not completed before the end of the fiscal year. UC compacted 75% of all compactable waste, which meets the Excellent performance measure rating.

3.7 CHEMICAL AND HAZARDOUS WASTE (Weight = 15% Earned = 15%)

3.7.a ***Chemical and Hazardous Waste****: This measure monitors performance of Hazardous and Chemical Waste Operations treatment, storage and disposal operations.*
(Weight = 15% Earned = 15%)

DOE Rating: Outstanding - 100%

Assumptions:

- *DP-10 funding of $4,584K will be received, not including facility management costs.*
- *If planned waste volumes are not realized, funding will be used for additional work scope or the funding will be carried over to the next fiscal year.*

Gradient:

Good:

- LANL will manage 100% of the mission support waste generated, in full regulatory compliance, from the generator through treatment and disposal within one year. Hazardous and Chemical Waste Operations will enforce full characterization by the generator to meet the Area L WAC, and utilize direct shipment from the generator sites to TSDFs when cost effective.

Excellent:

- In addition to a level of "Good," LANL will manage 80% of the mission support waste generated, from the generator through treatment and disposal, within nine months.

Outstanding:

- In addition to a level of "Excellent," LANL will manage 60% of the mission support waste generated, from the generator through treatment and disposal, within six months.

UC implemented a system to ship hazardous and chemical wastes directly from generating sites to offsite treatment and disposal facilities. This bypasses the need for the Solid Waste Operations facility to handle the waste, thereby reducing costs and eliminating holding times in storage areas. The contractor used this method to ship 100% of such waste generated in the first six months of the fiscal year achieving an Outstanding grade.

FUNCTIONAL AREA: ER/WM

3.8 MANAGERIAL ACCOMPLISHMENTS (Weight = 5% Earned = 4.5%)

3.8.a *Managerial Accomplishments* (Weight = 5% Earned = 4.5%)

DOE Rating: Excellent - 89%

Gradient:
Good:
- LANL will perform three "Green Zia" assessments; at least one will address TRU waste, and the additional 2 "Green Zia" assessments may address Hazardous, LLW, MLLW or TRU waste types.

Excellent:
- In addition to a "Good" performance, LANL must conduct two more "Green Zia" assessments in either of the MLLW, LLW, TRU or Hazardous waste types for a total of five assessments.

Outstanding:
- In addition to an "excellent" performance, LANL must complete one additional "Green Zia" assessment for a total of six assessments.

UC performed Green Zia assessments in six waste generating processes. Only five were completed. In the sixth, however, the waste generator implemented the waste minimizing results of the assessment before the assessment's completion achieving a high Excellent grade.

Performance Objective #4	**Good - 79%**

4.1 WASTE MANAGEMENT CHARGEBACK SYSTEM, PROJECT TRACKING SYSTEM (PTS) AND "ACCELERATING CLEANUP: PATHS TO CLOSURE PLAN UPDATES" (Weight 5% Earned = 4.0%)

4.1.a *Waste Management Chargeback System, Project Tracking System (PTS) and "Accelerating Cleanup: Paths To Closure Plan Updates".* (Weight 5% Earned = 4.0%)

DOE Rating: Good - 79%

Gradient:
Marginal:
- Less than "Good" performance

Good:
- LANL will be prepared to fully implement a cost-effective charge back system by October 1, 1999, consistent with DP's Waste Management Policy Guidance. The monthly PTS report for EM-funded MLLW and TRU waste activity is submitted to DOE/AL and LAAO on or before the date specified in DOE/AL's schedule for FY99. Updates to the "Accelerating Cleanup, Paths to Closure" Plan (EM Ten Year Plan) for legacy MLLW and legacy TRU waste, are submitted as required by DOE/AL.

UC prepared and implemented all accounting software needed to conduct the waste generator charge-back system. All required reports were completed on schedule. The contractor also made considerable unplanned efforts to participate in DOE EM waste

volume and data management planning systems for a Good grade.

FUNCTIONAL AREA:	**PERFORMANCE ASSESSMENT:**
ENVIRONMENT, SAFETY AND HEALTH	**Excellent - 83%**

Preamble

The Laboratory's goal is to accomplish its mission cost-effectively while striving for an injury-free workplace, minimizing waste streams and avoiding adverse impacts to the environment from its operations.

The following performance measure is linked to the guiding principles and key functions of ISM. It is a process oriented measure intended to enhance the existing ISM system by identifying key elements that are missing from the existing ISM plan or elements that are in need of enhanced support from institutional systems or processes.

Performance Objective #1	**Excellent - 83%**

1.1 ***PROCESS PERFORMANCE MEASURES****: Integrated Safety Management (ISM) is a system for performing work safely, assuring protection of employees, the public and the environment. The term "integrated" indicates that the safety management system is a normal and natural element of the performance of work; safety isn't a workplace addition, it is how we do business. ISM is the way that we meet the moral commitment not to injure people or the environment, and the business imperative to meet the ES&H requirements of the UC-DOE Contract for management and operation of the Los Alamos National Laboratory.* **(Weight = 30% Earned = 24%)**

1.1.a ***Implementation of ISMS:*** *Integrated Safety Management System (ISMS) milestones will be completed and implemented in accordance with the ISMS Implementation Plan. A gap analysis of the LANL ISMS will be conducted during this performance period as part of continuous system improvement. Gaps will have improvement actions developed and associated milestones will be integrated into the ISM schedule. The analysis and the process to develop system improvements will utilize a convened group that will include representatives from LANL program, line and support organizations, DOE program and field offices, and the UC Lab Administration Office, as well as industrial representatives as advisors.*

DOE Rating: Excellent - 80%

Assumptions:

- *The performance period for this measure is July 1, 1998 through June 30, 1999.*
- *Scope for the gap analysis and a staffing plan will be defined by the convened group.*
- *The convened group functions on the basis of consensus among the participants. Unresolved issues will be handled by the LANL Deputy Director for Operations, the Manager of the DOE/AL Operations Office and the DOE-LAAO Area Manager.*
- *The LANL ISM System will be used as the basis for the gap analysis.*
- *Comparisons will be against benchmarked systems chosen by the convened group.*
- *Recommended system improvements will be compared to existing ISM activities.*
- *The gap analysis and system improvement plans require approval by the Laboratory and the DOE.*
- *Those system improvement plans, as approved, will become part of the ISM Program.*
- *Modifications to milestone scope and schedule will be made through the existing ISMS Change Control Board process.*

FUNCTIONAL AREA: ES&H

- *System improvements will be defined and integrated into the ISMS Implementation Plan by January 4, 1999 or a revised date will be jointly agreed to by LANL, DOE and UC.*

Gradients:
Good:
- As specified in the assumptions, the January 4, 1999 milestone or revised target date is met.
- Eighty percent of ISMS milestones due during the performance period are completed on time

Excellent:
- Ninety percent of ISMS milestones due during the performance period are completed on time

Outstanding:
- Ninety-five percent of ISMS milestones due during the performance period are completed on time

LANL completed 90.3% of its ISM Implementation Plan milestones on time (28 of 31 milestones). LANL line management participated in the development of the gaps and in the "fixes" to the gaps. The three primary institutional gaps were addressed, in large part, in the plans identified in the Organizational ISM Plans by line and program managers. DOE found that, for the most part, these written plans begin to address the three priority gaps: 1) management, communications, and leadership, 2) Two-way communications, and 3) Employee involvement. Since the organizational plans were completed in the July timeframe, implementation of the plans within LANL was difficult to ascertain since limited time had passed from its approval. A review was performed at LANSCE Division to see if ISM had been implemented down to the field. The review indicated that LANSCE Division had implemented what they committed to in their ISM Plan. DOE and LANL mutually agreed to modify the January 4, 1999, milestone to coincide with the 3rd Quarter ISM CCB meeting in March. LANL and DOE failed to meet that expectation and LANL completed the modification of its ISM Implementation Plan in June 1999. Although completing this modification took longer than expected, LANL successfully implemented or addressed the implementation of all 15 gaps to meet the intent of the measure. Implementation over the next few years of the Organizational ISM plans and continuous improvement of it's ISM system are needed to address the top three gaps which cover communication and leadership; two-way communication; and employee involvement. Based on the gradients, LANL achieved an Excellent below midpoint and a score of 80%.

1.2 ***SYSTEM OUTCOME MEASURES:*** *System outcome measures are linked to the process measures. System outcomes are used to drive process excellence.* **(Weight = 70% Earned = 59.1%)**

DOE Rating: Excellent - 84%

1.2.a ***Environmental Performance****: Effective environmental performance will be appraised yearly. Tracking and trending is accomplished by evaluating the unweighted program scores.* **(Weight = 10% Earned = 8%)**

DOE Rating: Excellent - 80%

Assumptions:
- *For FY99, the performance period is July 1, 1998, through June 30, 1999.*
- *All uncontested violations and findings will be counted.*

FUNCTIONAL AREA: ES&H

- *The appraisal rating is the weighted sum of the selected environmental program scores. The selected environmental programs will each be rated by four factors, including (1) the number of environmental violations/findings resulting from inspections by regulatory agencies; (2) the environmental harm caused by the violations; (3) the number of repeat violations since the last formal inspection/audit; and (4) trends in the number of violations and repeat violations.*
- *A goal of 100% effectiveness is assumed. For each media, 2 points will be deducted for each non-repeat violation and 4 points will be deducted for each repeat violation. If a violation causes actual environmental harm, 30 points will be deducted for that media. In addition, the Laboratory will trend the number of violations and repeat violations for each media. The score for each media will be adjusted depending on the trends as shown in the following table.*

Trends	Points Adjustment
Non-repeat - Upward from previous year	Deduct 4 points more
Repeat - Upward from previous year	Deduct 8 points
Stable	No point adjustment
Non-repeat - Downward from previous year	Add 2 points
Repeat - Downward from previous year	Add 4 points

- *For RCRA and OTHER, a violation will be considered to be a repeat if the same violation occurred the previous year. For NPDES, a violation is a repeat violation if the exceedance occurred at the same location the previous year or during the performance year.*
- *The weighted percent counted in each program is subject to yearly negotiation. For FY99, the program scores are 50% for RCRA, 30% for NPDES, and 20% for OTHER programs (such as CAA, SDWA, UST, TSCA, etc.).*

Gradient:

Good: - 70 - 79

Excellent: - 80 - 89

Outstanding: - 90 - 100

The score of 80.2 is based on the weighted sum of the program scores for RCRA, NPDES, and OTHER (CAA, SDWA, UST, etc.), and is the score as calculated by the agreed upon algorithm for FY99 (July 1, 1998 to June 30, 1999 plus the transition quarter to September 30, 1999). The score results in a rating of Excellent.

It is noted that there have been no Compliance Orders issued by the New Mexico Environment Department (NMED) for the external RCRA hazardous waste inspection conducted August -September 1998 (with 34 apparent findings) nor for the 1997 inspection (with 52 apparent findings). NMED has not conducted an inspection since September 1998. Pending receipt of formal Compliance Orders from NMED for the 1997 and 1998 inspections, there are no uncontested violations in RCRA for the performance period, resulting in a 100 unweighted score and a 50 weighted score for this program. UC/LANL initiated divisional self-assessments of RCRA in November 1998 as a result of the large number of apparent findings in the 1997-1998 external inspections. The results of these self-inspections provided positive indications that UC/LANL applied appropriate management emphasis toward a Laboratory goal of "Zero RCRA Violations" and taken actions to improve its compliance posture for the next NMED inspection.

For the NPDES program, there were 13 permit exceedances noted during the period plus four more during the transition quarter (17 for five quarters) which is an upward trend

from the previous year (five exceedances over four quarters). The exceedances include nine non-repeat violations and eight repeat violations, resulting in an unweighted score of 38 and a weighted score of 11.4. Ten of the exceedances are associated with system upgrades and operation of the TA-50 Radioactive Liquid Waste Treatment Facility (RLWTF). UC/LANL has taken corrective actions to identify and correct the causes of the identified exceedances. Both the NPDES permit and the RLWTF Groundwater discharge permit are up for review and/or renewal. Submitted applications are under review and the issuance of theses permits are expected by the end of FY00. The compliance posture of this facility will need to be maintained at a high level during this renewal process, which will include public review and comment.

For the OTHER programs, one letter of warning from NMED was received related to violation of 40 CFR, subpart M (notification of demolition work involving asbestos) and counted as a violation. The Laboratory's subcontractor received the Notice of Violation for failure to make the required notification. No violations of any of the other environmental programs were received in FY99 plus the transition quarter. This one non-repeat violation results in an unweighted score of 94 and a weighted score of 18.8.

The overall score consists of the weighted score of RCRA (50) plus the weighted score of NPDES (11.4) plus the weighted score of OTHER (18.8) for a total score of 80.2. There are no overriding concerns or beneficial program aspects resulting in a need to adjust the score as calculated by the algorithm.

1.2.b Radiation Protection of Workers (Weight = 10% Earned = 9.7)

DOE Rating: Outstanding - 97%

1.2.b.1 ***Routine Exposures*****:** *Routine occupational radiation exposures are managed to assure that individual doses do not exceed specified limits. An effective ALARA (As Low As Reasonably Achievable) program is in place to manage collective dose.* **(Weight = 5% Earned = 4.8%)**

DOE Rating: Outstanding - 95%

Assumptions:

- *The performance period is January 1, 1998 through December 31, 1998. For subsequent years, the measure negotiation period shall be adjusted to allow negotiation to be completed before January 1st of each year. The performance for the year shall be reviewed by UC and DOE after the end of the performance year.*

  The performance period for Radiation Protection Program (RPP) activities is established by the requirements contained in 10 CFR 835. This regulation requires that all radiological dose records (and associated activities) be based on the calendar year (CY) running from January 1st through December 31st. The performance for CY98 was reviewed by UC. DOE evaluated the radiological performance measures for CY98.

- *Radiological work at LANL is performed in accordance with the Laboratory's DOE-approved Radiation Protection Program (RPP).*

FUNCTIONAL AREA: ES&H

Radiological work at LANL during CY98 was performed in accordance with a DOE-approved RPP (Revision 1.3) per memo from Bruce Twining to G. Thomas Todd, LAAO Area Manager, dated May 6, 1997.

- *Data reported for this measure include all external and internal doses [Total Effective Dose Equivalent (TEDE)] that are considered expected routine exposures. Excluded from this measure are planned special exposures and exposures resulting from life- or property-saving activities. Also excluded are internal exposures [Committed Effective Dose Equivalent (CEDE)] that are the result of intakes of transuranic alpha-emitting radionuclides from unplanned operational incidents, e.g., accidental releases from primary containment systems.*

  Per conversation with LANL's RPP Manager, the data reported for this measure includes all external and internal doses that are considered expected routine exposures. There were no planned special exposures or exposures resulting from life- or property-saving activities. Unplanned operational incidents resulting in intakes of transuranic alpha-emitting radionuclides are excluded from this measure, but are captured in Performance Measure 1.2.b.2.

- *Doses reported include: (a) individual radiation doses of 1 rem or more to the whole body (internal and external components); and (b) the collective dose for organizations with ALARA dose goals. (Note: ALARA dose goals are set and tracked for all organizations with collective doses exceeding 1 person-rem in the previous performance period.)*

  A review of the exposure data for this performance measure indicates that individual radiation doses of 1 rem or more to the whole body (internal and external components) and collective dose for organizations with ALARA dose goals exceeding 1 person-rem are captured for this performance measure.

- *ALARA dose goals can be adjusted periodically throughout the performance period, based on changes in anticipated workload. Such adjustments are subject to challenge by and approval of the Laboratory's ALARA Steering Committee, which may include ex officio representatives from DOE.*

  Per conversation with LANL's RPP Manager, ALARA dose goals for CY98 were adjusted periodically if changes in the anticipated workload were identified. The final ALARA goals for CY98 were approved by the ALARA Steering Committee and are presented in Table 1.2.b.2 of the FY99 ES&H Annual Appendix F Self-Assessment Report, Addendum, dated October 1999.

- *If through the dose optimization analysis process it is shown that the APM (ALARA protective measure, i.e., improved engineering controls, maintenance activities, etc.) is cost-effective (i.e. a net positive APM), then the APM shall be implemented.*

  Per conversation with LANL's RPP Manager, ALARA protective measures are implemented where appropriate when they are found to be cost-effective.

- *All monitored individuals are included in this measure.*

FUNCTIONAL AREA: ES&H

Per conversation with LANL's RPP Manager, radiological exposure data for all monitored individuals are captured by LANL's external and internal dosimetry programs. DOE has certified these programs.

- *The applicable facility/organization individual dose limit is at least as stringent and challenging as the DOE's 2 rem Administrative Control Level (ACL).*

  With the exception of NMT groups, an ACL of 1 rem was established for the individual dose limit in all LANL facilities/organizations with radiological activities. The NMT groups had an ACL of 2 rem for individual dose limits. These ACLs meet or exceed DOE's recommended ACL in 10 CFR 835.

Gradient:
Good:

- Any individual exceeding his/her lifetime dose limit (TEDE) is in an aggressive dose management program.

  This criterion was met. An examination of the lifetime dose limit (TEDE) records for CY98 indicated that no individual exceeded his/her lifetime dose limit. An aggressive dose management program would be put in place if someone exceeded their lifetime dose. During CY97's performance period, an individual did exceed his lifetime dose limit. A dose management plan was prepared. Records indicate that active participation by the individual and his facility manager successfully maintained his exposure below his lifetime dose limit.

- No individual dose exceeds 5 rem (TEDE) in the performance period.

  This criterion was met. An examination of the exposure records for CY98 indicated that no individual dose exceeded 5 rem (TEDE). The maximum TEDE was less than 2 rem.

- No individual dose exceeds 2 rem external effective dose equivalent in the performance period.

  This criterion was met. An examination of the exposure records for CY98 indicated that no individual dose exceeded an external EDE of 2 rem. The maximum EDE was less than 2 rem.

- No more than two organizations with a collective dose $\geq$ 5 person-rem fails to meet their collective dose goal ($\pm$ 20%) for the performance period. (see table)

  This criterion was met. An examination of the collective dose goals indicated that there were nine facilities/organizations with collective dose ^{3} 5 person-rem. All of the facilities/organizations met their collective dose goal within $\pm$ 20% during the performance period.

- For LANL groups with collective dose $\geq$ 10 person-rem, documented reviews of possible improvements to operations and maintenance practices are made and include cost/benefit decisions with the objective of optimizing collective dose.

FUNCTIONAL AREA: ES&H

This criterion was met. Numerous possible improvements to operations and maintenance practices were implemented during CY98 to optimize collective dose. The following examples of improvements to operations and maintenance practices are presented for those facilities/organizations with collective dose goals $\geq$ 10 person-rem. It should be noted that this list is not all-inclusive.

1. **NMT-2: The procurement of automated equipment to replace hands-on operations in the pyrochemical processing was pursued. Equipment and technique improvements were similarly identified for aqueous processing activities in the source recovery line and the chloride-based plutonium recovery line. Dose reduction efforts for other operations included: (1) trial use of real-time electronic dosimeters worn to characterize dose for various maintenance activities; (2) obtaining DOE approval to directly dispose of hydroxide cakes; and (3) pre-job planning for new feed materials to understand radiation emissions resulting from in-growth of decay products.**

2. **NMT-4: Dose reduction opportunities pursued by NMT-4 included: (1) installing a shielded cage for staging materials in the NDA Laboratory; (2) installing neutron absorbing material in two rooms of the TA-55 Vault; (3) evaluating mobile shielding for shipping container unpacking in the packing/unpacking room; and (4) designing a shielded transport cart for moving radioactive material in TA-55.**

3. **NMT-5: Dose optimization initiatives in NMT-5 included material handling efficiency improvements using a single point-of-contact system for disposition and sampling.**

4. **NMT-9: New neutron shields were designed for the aqueous processing activities in NMT-9. For the Milliwatt RTG/Heat source operation, new drill fixtures are being used to reduce set-up time and reduce drilling time by a factor of four. Other dose reduction efforts included: (1) the use of CRL quick-change, sealed–glove port system and (2) the performance of dose studies using real-time personal dosimeters.**

5. **JCNNM: The Zone 4 crew of electricians at LANSCE developed a scheme of installing cables in cable trays located in relatively inaccessible areas. The procedure utilizes a small radio-operated four-wheel-truck-drive chassis that fits in the tray and pulls a string through the cable tray. The string is attached to a rope that is attached to the cables. The crew also uses a motorized wheel chair to pull the rope through narrow corridors. In addition to reducing the risks from back strains and injuries, the technique will be used to minimize dose in areas of high radiation and/or surface contamination and in areas with airborne radioactivity.**

Excellent:

- No individual exceeds his/her lifetime dose limit (TEDE) in the performance period.

FUNCTIONAL AREA: ES&H

This criterion was met. As examination of the lifetime dose limit (TEDE) records for CY98 indicated that no individual exceeded his/her lifetime dose limit.

- No more than one organization with a collective dose ≥ 5 person-rem fails to meet their collective dose goal (± 20%) for the performance period. (see table)

  This criterion was met. There were nine facilities/organizations with collective dose ³ 5 person-rem. All of the facilities/organizations met their collective dose goal within ± 20% during the performance period.

- No more than two organizations with a collective dose of at least 2 person-rem but < 5 person-rem fails to meet their collective dose goal (± 20%) for the performance period. (see table)

  This criterion was met. There were seven facilities/organizations with collective dose of at least 2 person-rem but < 5 person-rem. Five of the seven facilities/organizations met their collective dose goal within ± 20% during the performance period. Two facilities failed to meet the their collective dose goal by more than 20% below the stated goals. The collective doses for these two facilities were –22% and –28%, respectively, below their goals.

  It should be noted that the most recent proposed modification of this criterion for CY99 changes the requirement that the actual dose fall within ± 20% of the stated goal to allow a minimum difference of 1 person-rem. This revision will permit organizations to focus on ALARA without the pressure to manipulate small numbers.

- For LANL groups with collective dose ≥ 5 person-rem, documented reviews of possible improvements to operations and maintenance practices are made and include cost/benefit decisions with the objective of optimizing collective dose.

  This criterion was met. Numerous possible improvements to operations and maintenance practices were implemented during CY98 to optimize collective dose. The following examples of improvements to operations and maintenance practices are presented for those facilities/organizations with collective dose goals ³ 5 person-rem but < 10 person-rem. These improvements are in addition to the examples presented in the good gradient for facilities/organizations with collective dose goals ³ 10 person-rem.

1. **LANSCE-2: LANSCE-2 personnel carried out improvements in the Proton Storage Ring (PSR) beam-injection system and the implementation of closed-orbit bumping in the injection upgrade phase of the LANSCE Reliability Improvement Project. These improvements reduce beam losses and consequent component activation by more than a factor of two, while increasing the beam intensity by more than 40%. The reduced activation resulted in lower personnel doses per maintenance activity in the PSR. Beam delivery operations can be extended from the present 4-6 months to 8 months. The improvements made to the PSR allow large increases in beam current and operating time with no expected increase in personnel exposures.**

FUNCTIONAL AREA: ES&H

2. **LANSCE-2: Cooling water manifolds for the PSR quadruple magnets were reconfigured by LANSCE-2 personnel to substantially improve accessibility and reduce failures of cooling hoses resulting from radiation damage. This reduced exposures of maintenance personnel by up to a factor of 5. Maintenance personnel received more than 1 person-rem of dose while repairing cooling-hose failures in CY97.**

3. **LANSCE-7: While upgrading the short-pulse spallation source target of the Manuel Lujan, Jr. Neutron Scattering Center, LANSCE-7 employees encountered a highly radioactive (160 R/hr) air separator unit located on a water system in an unshielded area. This device could have caused unacceptable radiation doses to personnel maintaining the water system and was already causing chronic elevated doses to personnel working in the service area. The air separator unit combined the functions of dirt catcher, which collected highly activated corrosion products from the tungsten target, air separator, and air eliminator. Before the removal operation, a local steel shield was installed, reducing the contact dose rate from 160 R/hr to 4 R/hr. Also, a portable HEPA-filtered air-handling unit was used to control contamination during the removal operation. Installing dirt catcher and air eliminators inside the target hot cell then separated the functions of the original unit. The air eliminator was left in the original location. The new air eliminator unit now has a dose rate after target irradiation of 13 mR/hr. This represents a dose rate reduction of more than 12,000.**

Outstanding:

- No individual dose (TEDE) exceeds the applicable facility/organization limit in the performance period.

  This criterion was not met. All but three individuals in the eighteen facilities/organizations with established ACLs met their TEDE goals. Three individuals exceeded their organizational ACL of 1 rem (TEDE). No individual exceeded their organizational ACL of 2 rem (TEDE).

- All organizations tracked with collective doses $\geq$ 2 person-rem fall within $\pm$ 20% of their dose goals for the performance period. (see table)

  This criterion was not met. There were 17 facilities/organizations with a collective dose goal ^{3} 2 person-rem. Fifteen of the 17 facilities/organizations met their collective dose goal within $\pm$ 20% during the performance period. Two facilities/organizations failed to meet the their collective dose goal by more than 20% below the stated goals. The collective doses for these two facilities were –22% and –28%, respectively, below their goals.

  It should be noted that the most recent proposed modification of this criterion for CY99 changes the requirement that the actual dose fall within $\pm$ 20% of the stated goal to allow a minimum difference of 1 person-rem. This revision will permit organizations to focus on ALARA without the pressure to manipulate small numbers.

FUNCTIONAL AREA: ES&H

- No more than one organization with a collective dose of at least 1 person-rem but < 2 person-rem fails to meet their collective dose goal (± 20%) for the performance period. (see table)

  This criterion was met. There was one facility/organization with a collective dose of at least 1 person-rem but < 2 person-rem. This facility/organization failed to meet its collective dose goal by more than 20% below the stated goal. The collective dose for this facility/organization was – 25% below its goal.

  It should be noted that the most recent proposed modification of this criterion for CY99 changes the requirement that the actual dose fall within ± 20% of the stated goal to allow a minimum difference of 1 person-rem. This revision will permit organizations to focus on ALARA without the pressure to manipulate small numbers.

- For LANL groups with collective dose ≥ 2 person-rem, documented reviews of possible improvements to operations and maintenance practices are made and include cost/benefit decisions with the objective of optimizing collective dose.

  This criterion was met. Numerous possible improvements to operations and maintenance practices were implemented during CY98 to optimize collective dose. The following examples of improvements to operations and maintenance practices are presented for those facilities/organizations with collective dose goals of at least 2 person-rem but < 5 person-rem.

1. **NMT-1: The Sample Management Team identified and implemented an improved containerization techniquefor their radioactive material handling. This improvement reduced the amounts of materials and the radiation exposure time required for handling these materials.**

2. **NMT-7: Dose reduction actions taken by NMT-7 included an optimization project to reconfigure PF-4 Room 432 to improve room layout for waste handling, assay, and packaging of transuranic waste materials.**

3. **CST-11: CST-11 personnel can receive exposures during radiochemistry operations at TA-48 on material exposed to LANSCE beams. The crane beam in the dispensary hot cell is not certified to transport the shielded cask containing targets from the Isotope Production Facility at LANSCE. Therefore, the cask must be set down in the hot corridor just outside the dispensary cell shielding doors with the doors open. This allows the crane to lift the cask lid containing the irradiated targets. During the certified transfer operation, personnel could be inadvertently exposed to radiation should they pass by the hot corridor entrance where the doors have no shielding. This problem was solved using engineered and administratively controlled processes. Specifically, door-open alarms and warning lights were installed, and both the hot cell area and the roof above are cordoned off whenever targets are transferred.**

Performance Criteria Gradients for Collective Dose

(acceptable performance implies collective dose during the performance period falls within ± 20% of goal)

FUNCTIONAL AREA: ES&H

Dose Range	*Good*	*Excellent*	*Outstanding*
≥ 1 to < 2 person-rem	*not evaluated*	*not evaluated*	*≤ 1 failure*
≥ 2 to < 5 person-rem	*not evaluated*	*≤ 1 failure*	*no failures*
≥ 5 person-rem	*≤ 2 failures*	*≤ 1 failure*	*no failures*

Summary:
All criteria in the good and excellent performance measure gradients were met. In addition, two of the four criteria in the outstanding performance measure gradient were met. Therefore, a score of 95% is appropriate. This score is equivalent to midpoint of the Outstanding rating category.

1.2.b.2 ***Radioactive Material Intakes****: Occupational internal exposures [Committed Effective Dose Equivalent (CEDE)] caused by intakes of radioactive material arising from operational incidents (i.e., accidental releases from containment systems in which the amount of material released and taken into the body is unexpected) are tracked, trended, and managed with the ultimate goal being zero intakes.*
(Weight = 5% Earned = 4.9)

DOE Rating: Outstanding - 98%

Assumptions:

- *The performance period is January 1, 1998 through December 31, 1998. For subsequent years, the measure negotiation period shall be adjusted to allow negotiation to be completed before January 1st of each year. The performance for the year shall be reviewed by UC and DOE after the end of the performance year.*

  The performance period for Radiation Protection Program (RPP) activities is established by the requirements contained in 10 CFR 835. This regulation requires that all radiological dose records (and associated activities) be based on the calendar year (CY) running from January 1st through December 31st. The performance for CY98 was reviewed by UC. DOE evaluated the radiological performance measures for CY98.

- *Data reported for this measure are the number of intakes of transuranic alpha-emitting radioactive material resulting in committed effective doses (CEDE) of ≥ 2 rem.*

  Per conversation with LANL's RPP Manager, the data reported for this measure includes intakes of transuranic alpha-emitting radioactive material only. Potential intakes from other radioactive materials, i.e., tritium, are not included in this performance measure.

- *This measure does not apply to intakes resulting from chronic, low-level exposures (i.e., those intakes not attributable to specific operational incidents) or to intakes of any radionuclide which is not a transuranic alpha-emitting radionuclide.*

  Per conversation with LANL's RPP Manager, this measure does not apply to intakes resulting from chronic, low-level exposures (i.e., those intakes not attributable to specific operational incidents) or to intakes of any radionuclides, which is not a transuranic alpha-emitting radionuclide.

- *All monitored individuals are included in this measure.*

  Per conversation with LANL's RPP Manager, radiological exposure data for all monitored individuals are captured by LANL's internal dosimetry program. DOE has certified this program.

Gradient:
Good:

- The total number of intakes $\geq$ 2 rem occurring in the performance period does not exceed four.

  This criterion was met. There were no intakes exceeding 2 rem CEDE during this performance period.

  [Observation: One individual received a potential intake of approximately 5 rem from an alpha-emitting radionuclide during the last quarter of CY98. This suspected intake was discovered when the individual's routine bioassay results were examined. The routine bioassay schedule for alpha-emitting radionuclides is every six months. To preclude the possibility of a false-positive result, the bioassay program requires three positive indications in sequence before action is taken on the suspected intake. Because the last indicator occurred in the last quarter of CY99 and the suspected intake is still under investigation, this intake will be captured in the CY99 performance measures. Therefore, this incident will not be assessed against the CY98 performance measures.]

- The number of intakes $\geq$ 2 rem occurring in the performance period attributed to the violation of administrative controls and/or the unauthorized circumvention of engineering controls does not exceed one.

  This criterion was met. There were no intakes exceeding 2 rem CEDE during this performance period.

  [Observation: One individual received a potential intake of approximately 5 rem from an alpha-emitting radionuclide during the last quarter of CY98. This suspected intake is still under investigation and no root cause analysis has been performed. This intake will be captured in the CY99 performance measures. Therefore, this incident will not be assessed against the CY98 performance measures.]

- The number of intakes $\geq$ 4 rem occurring in the performance period does not exceed one.

  This criterion was met. There were no intakes exceeding 2 rem CEDE during this performance period.

  [Observation: One individual received a potential intake of approximately 5 rem from an alpha-emitting radionuclide during the last quarter of CY98. Because this suspected intake is still under investigation, this intake will be captured in the CY99 performance measures. Therefore, this incident will not be assessed against the CY98 performance measures.]

FUNCTIONAL AREA: ES&H

Excellent:

- The number of intakes $\geq$ 2 rem occurring in the performance period does not exceed one.

  This criterion was met. There were no intakes exceeding 2 rem CEDE during this performance period.

  [Observation: One individual received a potential intake of approximately 5 rem from an alpha-emitting radionuclide during the last quarter of CY98. This suspected intake was discovered when the individual's routine bioassay results were examined. The routine bioassay schedule for alpha-emitting radionuclides is every six months. To preclude the possibility of a false-positive result, the bioassay program requires three positive indications in sequence before action is taken on the suspected intake. Because the last indicator occurred in the last quarter of CY99 and the suspected intake is still under investigation, this intake will be captured in the CY99 performance measures. Therefore, this incident will not be assessed against the CY98 performance measures.]

- No intakes $\geq$ 2 rem attributed to the violation of administrative controls and/or the unauthorized circumvention of engineering controls during the performance period.

  This criterion was met. There were no intakes exceeding 2 rem CEDE during this performance period.

  [Observation: One individual received a potential intake of approximately 5 rem from an alpha-emitting radionuclide during the last quarter of CY98. This suspected intake is still under investigation and no root cause analysis has been performed. This intake will be captured in the CY99 performance measures. Therefore, this incident will not be assessed against the CY98 performance measures.]

- The number of positive nasal contaminations, i.e., $\geq$ 50 dpm alpha, either nostril, does not exceed 20.

  This criterion was met. There were 5 positive nasal contamination events that exceeded 50 dpm alpha, either nostril during this performance period.

Outstanding:

- No intakes of radioactive material $\geq$ 2 rem occur during the performance period.

  This criterion was met. There were no intakes exceeding 2 rem CEDE during this performance period.

  [Observation: One individual received a potential intake of approximately 5 rem from an alpha-emitting radionuclide during the last quarter of CY98. This suspected intake was discovered when the individual's routine bioassay results were examined. The routine bioassay schedule for alpha-emitting radionuclides is every six months. To preclude the possibility of a false-positive result, the bioassay program requires three positive indications in sequence before action is taken on the suspected intake. Because the last

indicator occurred in the last quarter of CY99 and the suspected intake is still under investigation, this intake will be captured in the CY99 performance measures. Therefore, this incident will not be assessed against the CY98 performance measures.]

- The number of positive nasal contaminations, i.e., ≥ 50 dpm alpha, either nostril, does not exceed 10.

  This criterion was met. There were five positive nasal contamination events that exceeded 50 dpm alpha, either nostril, during this performance period.

Summary:
Since the decision was made not to assess the suspected intake of approximately 5 rem that occurred during the last quarter of CY98, all criteria in the good, excellent, and outstanding performance measure gradients were met. Therefore, a score of 98% is appropriate. This score is equivalent to above the midpoint of the outstanding rating.

1.2.c ***Routine Waste Minimization:*** *The Laboratory will (1) reduce routine, average annual waste generation by 8% per year for Low Level (LLW), Mixed Low Level (MLLW), and Hazardous (HAZ) waste compared to CY93 routine waste generation (Reference Secretary of Energy Memorandum, subject: Departmental Pollution Prevention Goals, May 1, 1996), and (2) purchase EPA-designated items with recycled content according to the conditions of Executive Order 12873.* **(Weight = 10% Earned = 8.0%)**

DOE Rating: Excellent - 80%

Assumptions:

- *The performance period is July 1, 1998, through June 30, 1999.*
- *Hazardous waste includes Resource Conservation and Recovery Act Hazardous (RCRA) waste, state-regulated hazardous waste, and Toxic Substances Control Act (TSCA) hazardous wastes.*
- *In the event of workload changes, greater than 10%, that significantly affect LLW, MLLW, or HAZ waste generation, the Laboratory will bring these workload changes to the attention of DOE and UC who will negotiate a measure adjustment.*
- *Management of EPA-designated-items procurement is a joint environmental management and procurement division responsibility.*
- *The Laboratory can purchase non-recycle-content items if Northern New Mexico suppliers do not offer recycle-content versions with competitive availability, competitive price, or of requisite performance. The Laboratory will demonstrate an attempt to facilitate Northern New Mexico suppliers in obtaining recycle-content items in the event that the items aren't available at this time.*
- *EPA designated items where the Laboratory purchases less than $10,000 per annum are not required to include recycled content and need not be included in reports under this performance measure.*
- *Purchase card purchases will be excluded from computing the percentage of EPA-designated items purchased by the Laboratory. The Laboratory will educate purchase card users on the requirement to purchase recycle-content items under the conditions of E.O. 12873.*
- *The Laboratory will report water usage quarterly.*

Gradient:
Good:

- An 8% reduction is achieved on the averaged Laboratory-wide routine generation of LLW, MLLW and HAZ waste based on CY93 waste generation, and greater than 80% of EPA-designate items are procured with recycled content or are excepted due to cost, availability, or performance.

Excellent:

- A 10% reduction is achieved on the averaged Laboratory-wide routine generation of LLW, MLLW, and HAZ waste based on CY93 waste generation, and greater than 90% of EPA-designate items are procured with recycled content or are excepted due to cost, availability, or performance.

Outstanding:

- A 12% reduction is achieved on the averaged Laboratory-wide routine generation of LLW, MLLW, and HAZ waste based on CY93 waste generation, and greater than 100% of EPA-designate items are procured with recycled content or are excepted due to cost, availability, or performance.

LANL achieved an Excellent rating by achieving greater than 10% reduction of the averaged Laboratory-wide routine generation of LLW, MLLW, and HAZ waste based on CY93 waste generation but the Affirmative Procurement Purchase Rate was 86% for the performance year which is a good rating. Overall, LANL achieved an excellent rating with an 80% score.

1.2.d ***Management Walkarounds:*** *All Laboratory work must meet applicable safety expectations as defined in Laboratory LIRs and the DOE approved ISMS Implementation Plan. Ensuring that the work meets those expectations is a key management and employee responsibility and a core function of Integrated Safety management. The conduct of work will be assessed for adherence to safety expectations through Management Walkarounds (MWA) as part of the LANL performance assurance program. Any deficiencies found through this process will be appropriately addressed.* **(Weight = 10% Earned = 8.9)**

DOE Rating: Excellent - 89%

Assumptions:

- *The Walkaround Program implementation requirements are specified in LIR 307-01.*

The Management Safety Walkaround Program is specified in LIR 307-01-3.1, dated March 9, 1998.

Gradient:

Good:

- 85% to 89% of designated managers perform the requisite number of walkarounds for their organization.

This criterion was met. The total number of walkarounds required by Laboratory management was 4,371 for the reporting period. The laboratory completed 4,097. This is a completion percentage of 93.7%.

- A documented institutional system is put in place to begin evaluating the quality of database findings and to track and trend walkaround observations. This system will be in place within 6 months and fully defined by the end of the performance period. The system will address issues such as closure of findings and verification.

This criterion was met. AA-2 has a database system that is used to track and trend (in a limited capacity) the Management walkarounds performed. The system does address

closure of findings and verification. The calculated quality percentage was 24/32 areas or 75%.

Excellent:

- 90% to 94% of designated managers perform the requisite number of walkarounds for their organization.

This criterion was met. The total number of walkarounds required by Laboratory management was 4,371 for the performance period. The laboratory completed 4,097. This is a completion percentage of 93.7%.

- Hazard Recognition Awareness training will be provided throughout the year to managers.

This criterion was met. During the performance period, the training division gave Hazard Recognition Awareness training sessions. Each session was attended by more than 200 managers.

Outstanding:

- 95% or more of designated managers perform the requisite number of walkarounds for their organization.

This criterion was not met. AA-2 recognizes that this is an on-going process and they are seeing improvements in the system.

- 80% of target completion dates for MWA corrective actions are met on schedule.

This criterion was met. The Management Walkarounds database tracks completion dates for Management Walkarounds corrective actions. For the performance period there were a total of 1,140 corrective actions and 912 of those actions were completed on schedule for an 80% completion rate.

The performance of the Management Walkarounds Program was rated Excellent. This was based on LANL implementing a documented institutional system for evaluating the quality of database findings and to track and trend walkaround observations, achieving a 93.7% completion rate of designated managers performing walkarounds, providing hazard recognition training throughout the year to managers, and meeting 80% of target completion dates for Management Walkaround corrective actions.

The documented institutional system consisted of Safety Function Manager reports, Management Systems Assessment reports, the Management Walkaround database, and the quarterly Appendix F self-assessment process. These systems provided a system to track, trend, review, and analyze the quality of management walkaround findings. The April 1999 Semiannual Safety Self-Assessment report contained excellent assessments of their programs, candid reviews and actions. This was a noteworthy practice.

LANL management was required to perform 4,371 management walkarounds during the performance period. LANL management actually performed 4,097 management walkarounds. This was for a 93.7% completion rate.

During the performance period, the training division gave four classes on hazard recognition awareness. They were Laboratory Work Practices, Ergonomics, Forklifts, and

FUNCTIONAL AREA: ES&H

Security. Each of these classes was attended by more than 200 managers. As part of the Laboratory Work Practices class, the training division gave a Management Walkaround Program Workshop, designed to assist workers in the identification of hazards and unsafe work practices. This was a noteworthy practice. Also, AA-2 provided managers with mentoring and assistance on walkarounds for hazard recognition.

The management walkaround database tracked completion dates for management walkaround corrective actions. For the performance period there were a total of 1,140 corrective actions and 912 of those actions were completed on schedule for an 80% completion rate.

Improvement Areas

- **Increase utilization of management guidance cards, (approximately 50% of the managers actually use the management guidance cards),**
- **Maintain updated guidance cards (some of the cards were outdated), and**
- **Increase the quality of management walkarounds (of the 32 walkarounds observed by AA-2, problems were noted in 8).**

1.2.e ***Hazard Analysis and Control***. *Before work is performed, associated hazards are identified and evaluated. Controls are established, as needed, to provide adequate assurance that the workers, public and environment are protected from adverse consequences. This control system is analyzed to determine weaknesses, potential for failure, and the associated residual risk. The hazards associated with the work and the control system established to mitigate those hazards are communicated to the workers and other personnel that might be impacted by the work. Management authorizes the work based on residual risk and authorizes workers based on the adequacy of their knowledge and skills to perform the work safely.*

Work with significant risk is not initiated until the control system is established. If the control system for existing work is found to be inadequate, that work is suspended until improvements in the control system brings the risk to an acceptable level.
Management systems are established to implement these safe work practices and are documented with the following elements:

- *Inventory of activities*
- *Hazard Control Plans (when controls need to be developed or modified) – include initial risk assessments, review (commensurate with risk) of control systems, and determination of residual risk*
- *Authorization of Work (when a control system needs to be developed or modified)*
- *Authorization of Workers (documented for low and medium residual risk work)*

(Weight = 10% Earned = 8.8%)

DOE Rating: Excellent - 88%

Assumptions:

- *The performance period for this measure is July 1, 1998 through June 30, 1999.*
- *The safe-work-practices implementation requirements are specified in LIR 300-00-01.*

The safe-work practices implementation requirements are specified in LIR 300-00-01 *Safe Work Practices*, LIR 300-00-02.1, *Documentation on Safe Work Practices,* and LIR 250-02-02.6, *Facility-Tenant Agreements.*

FUNCTIONAL AREA: ES&H

- *Hazard identification, evaluation, and analysis training is required for those individuals assigned the primary responsibility for developing or modifying controls to mitigate high or medium risk hazards.*

  LANL trained around 2,000 employees on the hazard identification, evaluation, and analysis techniques incorporated into LANL's ISMS. These techniques are consistent with DOE M 450.4-1, *Integrated Safety Management System Guide.*

- *The focus of safe work practice implementation for this performance period is on medium and high initial risk activities.*

  See discussion under "Outstanding" bullet 1, below.

- *The Laboratory shall perform a self-assessment of the safe-work-practice management systems prior to January 1, 1998.*
- *The Laboratory shall perform a self-assessment, based on statistical sampling, to determine the effectiveness of safe-work-practice implementation at the worker level. This assessment will include the degree to which workers:*
  - → *can identify the hazards associated with their work,*
  - → *are familiar with the hazard-control system established to mitigate the hazards and its use,*
  - → *have the appropriate training to perform the work safely, and*
  - → *are authorized by their management to perform the work.*

  The Laboratory's Audits and Assessments Division compiled the results of individual division's self-assessments through the quarter ending June 1999. The self-assessments focused on the assumptions of Performance Measure 1.2.e.

- *The relative weighting of these components of the self-assessment will be established in conference with DOE.*

Gradient:

Good:

- Laboratory Divisions have established management systems to implement safe work practices as evidenced by the documentation listed above or their equivalents.
- Hazards and hazard-control systems for high initial-risk work are documented within the first 6 months of the performance period or sooner, as evidenced by the self-assessment.
- The composite score in the implementation self-assessment for workers engaged in medium and low residual risk work is 80% or better.

Excellent:

- Hazards and hazard-control systems for high and medium initial risk work are documented within the first 6 months of the performance period or sooner, as evidenced by the self-assessment.
- The composite score in the implementation self-assessment for workers engaged in medium and low residual risk work is 90% or better.

Outstanding:

- Hazards and hazard-control systems for high and medium initial risk work are documented within the first 6 months of the performance period and those for low initial-risk work are completed within the performance period, as evidenced by the self-assessments.

  AL's *Integrated Safety Management Milestone Validation,* dated May 24, 1999, concluded that LANL implemented safe work practices as defined in LIR 300-00-01 for initial high and medium risk activities. The AL Safe Work Practices Special

FUNCTIONAL AREA: ES&H

Assessment Team (SWP Team) determined that the current versions of the Safe Work Practices LIR, the Documentation of Safe Work Practices LIR, and the recently issued Safe Work Practices Implementation Guidance (LIG) clearly address implementation of Safe Work Practices for initial low and minimal initial risk activities. The SWP Team identified several examples of LANL's effort to implement the LIRs and LIG. The SWP Team found evidence confirming LANL's self-assessment conclusions that Safe Work Practices were implemented for initial high, medium, low, and minimal risk activities.

- The composite score in the implementation self-assessment for workers engaged in medium and low residual risk work is 95% or better.

  The composite score in the implementation self-assessment was 96.38%.

- The relative weighting of these components of the self-assessment will be established in conference with DOE.

Gradient:
Outstanding - 0.90
Excellent - 0.80
Good - 0.70
Marginal/Unsatisfactory - less than 0.70

From October 12, 1999 through October 22, 1999, AL conducted a special assessment in accordance with special contract clauses. One element of the special assessment focused on Safe Work Practices, as delineated in the LIRs. The Safe Work Practices LIRs and associated guidance documents describe the methods by which LANL organizations analyze hazards and establish controls. The AL/LAAO Safe Work Practices Team's (SWP Team's) efforts represent an evaluation of Performance Measure 1.2.e.

The SWP Team determined that LANL had "implemented" safe work practices in accordance with the special contract clauses (as "implemented" is defined in the LANL ISM System Description). The SWP Team found some local defects and opportunities for improvement. In some cases the assessed organizations were aware of them. Personnel interviewed stated that, due to the time pressure to demonstrate implementation, their efforts may have taken advantage of the Safe Work Practice LIRs' flexibilities. For example, some organizations rely on existing standard operating procedures, Activity Hazards Analyses, and other types of documents in lieu of developing new Hazard Control Plans (HCPs). They recognized that the previously existing documents may not contain the results of hazard analysis as defined in LIR 300-00-01.1 and stated their intent to convert to HCPs in accordance with established review cycles. The SWP Team did not identify any systemic nonconformances to the institutional requirements.

1.2.f ***Maintenance of Authorization Basis****. The Laboratory operates its nuclear facilities within the facility's operating parameters defined by the facility authorization basis. Parts of the Authorization Basis include: Technical Safety Requirements (TSRs), the Operating Safety Requirements (OSRs), BIOs, formally documented ORRs, approved USQs, etc. One component of maintaining the Authorization Basis includes the Unreviewed Safety Question Determination (USQD) process.* **(Weight =10% Earned = 5.9)**

DOE Rating: Unsatisfactory - 59%

FUNCTIONAL AREA: ES&H

Assumptions:

- *This measure addresses elements of the USQ process, TSR/OSR violations, and the quality of Authorization Basis Documentation (ABD).*
- *For the TSR/OSR section, no penalty will be applied to subsequent and similar findings if lessons learned are implemented between nuclear facilities.*
- *The number of screens and reviews required for the USQ section is dependent on the overall number available during the performance year for potential screening. For example, if there are not 40 negative USQ screens and 40 negative USQDs available in the sampling performance year, then the amount available will be sampled at 100%. If there are enough available to meet the random sampling requirements in Section I, then a random selection of negative USQ screens and USQDs shall be selected for review.*
- *Any "as found discrepant" conditions will be counted under the USQ portion of this measure and not under the TSR/OSR section.*
- *The overall measure score is an average of the performance scores for each of the three sections.*
- *The scoring for each section starts at 100% or "Outstanding" performance and degrades or improves based on performance specified below.*
- *The facilities that are assessed in the USQ Process and TSR/OSR Violations sections of this measure are listed below:*

TA-3-29 CMR (CAT -2 Nuc)
TA-18 Kivas 1, 2, 3 & Hillside Vault (CAT -2 Nuc)
Low Level Radioactive Waste Disposal and
Transuranic Waste Storage Facility TA-54 (Area G) (CAT -2 Nuc)
TA-55-4 (PF-4) (CAT -2 Nuc)
RANT TA-54-38 (CAT -2 Nuc)
RAMROD TA-50-37 (CAT -2 Nuc)
TWISP TA-54 (CAT -2 Nuc)
TSFF TA-21-209 (CAT -2 Nuc)
TSTA TA-21-155 (CAT -2 Nuc)
WCRRF TA-50-69 & 190 (CAT-2 Nuc)
WETF TA-16 buildings 205, 205A (CAT-2 Nuc) Building 450 to be added after it becomes operational
RLWTF TA-50 (CAT-3 Nuc)
Radiochemistry TA-48-1 (CAT-3 Nuc)

Section I

USQ Process

Scoring for Frequency of Reviews

During the performance year the Laboratory will perform a review of 40 negative USQ screens, 40 negative USQDs and 100% of all positive USQDs will be reviewed per the USQ Quality Improvement Plan agreed upon by the Laboratory and DOE-LAAO. No penalty is assessed for "failing conservative" with regard to a USQD determination (a positive that was really a negative) so this component does not enter into the score determination.

Negative USQ screens reviewed	Negative USQDs reviewed	Score
Greater than 40	Greater than 40	+10
30 to 39	30 to 39	-30
20 to 29	20 to 29	-50
10 to 19	10 to 19	-70
Less than 10	Less than 10	-90

Other point decrements and additions:

FUNCTIONAL AREA: ES&H

- Deduct 5 points for failure to perform the USQ process in accordance with Paragraphs 10a through 10e of Order 5480.21
- Deduct 10 points for each negative USQD reversed by the DOE or deduct 30 points if DOE overturns a negative USQD and the Laboratory takes no action to review the facility USQ process
- Add 10 points if an internal sampling review of USQDs and screens occurs and if lessons learned are shared between nuclear facilities and evaluated for applicability by other facilities

Gradient:
Good: 70%
Excellent: 80%
Outstanding: 90%

During this performance period, LANL reviewed 50 negative USQ screens, 60 negative USQDs, and 13 positive USQs for DOE approval resulting in 10 points. The review was performed in accordance with the "Plan for USQ Program Quality Improvement at LANL." This exceeded the goal of 40 negative USQ screens and 40 negative USQDs. Although there was a significant increase in the number of satisfactory change packages from the previous performance period, 26 packages were found to contain some deficiencies and 13 packages were found to be unsatisfactory for a reduction of 65 points. According to the LANL self-assessment report, DOE-LAAO reversed one negative TA-18 USQD, USQD U-99-291 Flattop Hydraulic Oil Leak, for a deduction of 10 points.

The performance measure scoring criteria requires that LANL take action to review facility USQ processes if DOE overturns a negative USQD. In the self-assessment report, LANL cites the DOE approved facility specific USQ procedure for LACEF and the USQ sampling effort as evidence of the TA-18 review. But these activities were ongoing rather than in response to the reversed USQ. As part of the FY99 USQ sampling effort, ESH-3 asked organizations, including TA-18, a series of questions concerning the USQ process, i.e., training qualifications. However this information has not yet been evaluated or published. An ESH-3 representative indicated that FY00 USQ sampling for TA-18 is scheduled for December 1999. As no formal review of the TA-18 USQ process has been performed to date following the overturn of the USQD in June 1999 but taking the sampling effort and the USQ procedure into account, an additional 10 points is deducted by DOE.

Lessons-learned presentations were conducted for sharing between nuclear facilities. However, interviews during the recent DOE Verification of LANL Integrated Safety Management indicated that facility management had mixed reviews of the value of the three lessons-learned sessions. In addition, the DOE Senior Authorization Basis Manager attended a session in which only one representative from facility management was present and that representative was a support contractor. LANL proposes the full 10 points for the lessons-learned presentations and internal sampling review but DOE considers 5 points to be reasonable given the lack of facility participation in the presentations.

During this performance period, other unsatisfactory USQD packages came to the attention of DOE that are not indicated in the LANL self-assessment report. In a memorandum dated December 17, 1998, DOE-LAAO found the scope of RLWTF modifications addressed in a negative October 1996 USQD to be outside the bounds of the USQD process. During the review of WETF OSR changes, DOE-LAAO discovered a 1994 USQD inappropriately evaluated as negative for a significant change to the facility. In addition, that USQD addressed a change to the OSRs. This was documented in a DOE-LAAO memorandum dated June 29, 1999. Based on the two reversed change packages, an additional 20 points is deducted.

FUNCTIONAL AREA: ES&H

In the July to August 1999 time frame, ESH-3 consulted with LAAO on negative WCCRF USQD TA-50-69-98-05, "Use of Mobile Non-Destructive Assay Equipment Outside the WCCRF for Transuranic Waste Analysis." The USQD evaluated the change against the authorization basis for another facility where the equipment had been used rather than against the WCCRF authorization basis. DOE-LAAO determined the new operation to pose a positive USQ. The discovery of this reversed USQ is outside the FY99 performance period but is mentioned due to the change in the FY00 performance period to begin October 1, 1999, i.e., FY00 will not include July to September 1999.

In summary, DOE has determined a scoring of 10 points and a weighted score of 3.3 for this section.

SECTION II:
TSR/OSR VIOLATIONS
For purposes of this performance measure, a TSR/OSR violation shall consist of any of the following:

- Operating a facility in modes for which the Limiting Conditions for Operation (LCO) are not met when required (or if OSRs are present when the OSRs are not met)
- Failure to enter appropriate action conditions and/or complete the associated required actions per the TSRs or after discovery that an LCO was not met
- Failure to complete surveillance requirements within the specified period, including the 25% grace period and not placing the facility into the appropriate mode for which the LCO apply. (Note: Routine use of the 25% grace period is a violation of the TSRs and will be assessed as such.)

Surveillances

- If 95% of surveillances are performed within less than 10% of the grace period, add 5 points per facility per performance year.
- If all surveillances are performed within the grace period (as specified in the authorization basis), no points are added or subtracted.
- If surveillances occur outside of the grace period, deduct 5 points per facility per performance year.

Other Violations

- For each TSR/OSR violation other than surveillance requirements, deduct 10 points per facility per year.

Gradient:
Good: 70 %
Excellent: 80%
Outstanding: 90%

For nine of the 13 designated facilities, at least 95% of surveillances were performed within less than 10% of the grace period. At five points per facility, this results in 45 points. LANL indicated there were two TSR/OSR violations at the Chemistry and Metallurgy Research (CMR) Facility that meet the performance measure criteria for a TSR/OSR violation resulting in a deduction of 20 points. These violations were reported in occurrence reports ALO-LA-LANL-CMR-1999-0002 and ALO-LA-LANL-CMR-1999-0001. LANL also identified two additional CMR occurrences (ALO-LA-LANL-CMR-1998-0029 and ALO-LA-LANL-CMR-1998-0031) in the Appendix F self-assessment report that according to LANL were not violations of Limiting Conditions of Operation (LCOs). DOE disagrees with this LANL determination and has identified an additional three TSR/OSR violations as described in the following table for a total of seven TSR/OSR violations or a deduction of 70 points. Some of these DOE-identified TSR/OSR violations could have resulted in additional penalties, i.e., surveillances occurred outside of the grace period for an additional

deduction of five points per facility. DOE chose not to exercise this option. In summary, DOE has determined a scoring of 75 points and a weighted score of 25 for this section.

FUNCTIONAL AREA: ES&H

Discovery Date	Discussion/Occurrence Report	Violation Number	Notes
06/25/99	During the performance measure rating period (6/25/99) LAAO received a proposed change to the WETF OSRs in support of USQ-WETF-059. In order to approve this proposed change, LAAO conducted a review of previous USQs and discovered an unapproved change to the OSRs which was made in 1994 (WETF-USQD-002) under a negative USQD. The title of the USQD was "Deleting the High Range Tritium Monitors from the Limiting Condition of Operation (LCO) in Section 3.1 of the Operating Safety Requirements (OSR) at the Weapons Engineering Tritium Facility (WETF)." In Section 4., the question: "The situation being reviewed requires a change to the OSRs?" is answered: No. This is a change to the TSRs which should have been immediately forwarded to DOE (a USQD is not required in this case). However, it is also a USQD that was overturned by DOE in the approval letter for the subject issue. DOE stated that WETF-USQD-002 was inappropriately evaluated by the facility as negative, thus allowing the TSR change to be made without DOE approval. The situation was brought to resolution in the approval of WETF-USQD-059. Once LANL unilaterally approved this change, LANL failed to meet the DOE-approved LCO, resulting in an OSR violation. The discovery of the violation was documented by DOE-LAAO in a memorandum dated June 29, 1999.	1	Changing facility TSRs without DOE approval would adversely affect LCO action statements and Surveillance requirements in the OSRs/TSR and OSR/TSR implementation procedures and would also be of interest from an ISM controls implementation perspective.
06/29/99	Another issue very similar to the above was discovered by LANL personnel in the preparation of report LA-CP-99-259: "Authorization Basis Quality Review Final Report Summary of Findings and Examinations of Causes for LANL Authorization Basis Deficiencies." A sub-report issued on June 29, 1999, applicable to the Radioactive Liquid Waste Treatment Facility states (ref. page ii) "The team identified an immediate safety concern in the area of control implementation. A TSR document was developed, approved through the responsible Laboratory Division Director, approved by DOE/AL, and issued for use in late 1995. However, the TSR document	2	Not implementing the Facility TSRs/OSRs would directly, and adversely, affect LCO action statements and Surveillance requirements in the OSRs/TSRs and OSR/TSR implementation procedures and would also be of interest from an ISM controls implementation perspective.

FUNCTIONAL AREA: ES&H

Discovery Date	Discussion/Occurrence Report	Violation Number	Notes
	apparently was not implemented formally. Many, if not all, of the administrative controls specified in the TSRs are implemented in the facility programs and procedures, but there does not appear to be a link between the operational procedures and the associated safety requirements in the TSRs. We believe that the failure to formally implement the issued and approved TSRs is a significant breakdown in the AB program and consider this deficiency to be an immediate safety concern for the purposes of the AB Quality review Program." In generating the ITSRs that became required for the facility, DOE performed a review of this issue and fully agrees with the assessment above. Not implementing TSRs in a (as of that time) Category 2 nuclear facility is a violation of the TSRs.		
03/11/99	OR ALO-LA-LANL-CMR-1999-0006, NMT-TSR-306, R002 did not include 10 rooms in combustible control. Generic surveillance 4.0.3 was used to justify adding 24 hours to the required surveillance time in TSRs to state no LCO surveillance violation. This statement is only for preventing facility from going to Mode 2, NOT to eliminate TSR violations due to missed surveillances.	3	Not implementing the Facility TSRs/OSRs would directly, and adversely, affect LCO action statements and Surveillance requirements in the OSRs/TSRs and OSR/TSR implementation procedures and would also be of interest from an ISM controls implementation perspective.
02/4/99	OR ALO-LA-LANL-CMR-1999-0002, Fire watch on Fire Panels released without battery backup verification. OR incorrectly states that entering LCO caused violation. Entering LCO is NOT the violation. (Note: this TSR/OSR violation was self-identified by LANL).	4	Not fully implementing the Facility TSRs/OSRs would directly, and adversely, affect LCO action statements and Surveillance requirements in the OSRs/TSRs and OSR/TSR implementation procedures and would also be of interest from an ISM controls implementation perspective.

FUNCTIONAL AREA: ES&H

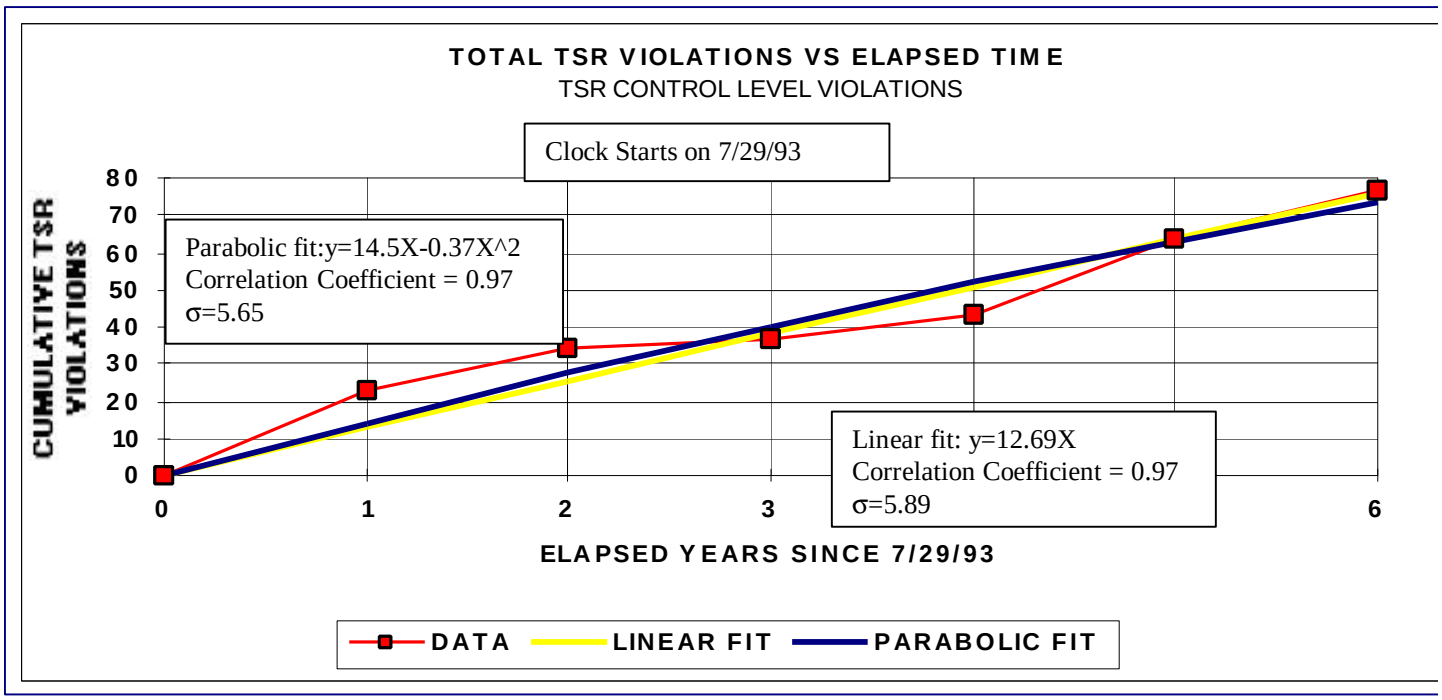
Discovery Date	Discussion/Occurrence Report	Violation Number	Notes
01/25/99	OR ALO-LA-LANL-CMR-1999-0001, Perchloric Acid Fuming without meeting LCO surveillance for hood wash down. (Note: this TSR/OSR violation was self-identified by LANL).	5	Not fully implementing the Facility TSRs/TSRs when required by ongoing operations would directly, and adversely, affect LCO action statements and Surveillance requirements in the OSRs/TSRs and OSR/TSR implementation procedures and would also be of interest from an ISM controls implementation perspective.
03/3/99	OR ALO-LA-LANL-WASTEMGT-1999-0002, similar to 2 above. Issue with magnahelics out of specification with SAR. Facility (RLWTF) did not know that they had TSRs so OR talks about SAR violation only. Because this generic issue at RLWTF was addressed in #2 above, it will not be double counted under the Appendix F performance measures again here. It will, however, be listed here for future tracking and trending purposes as a separate TSR/OSR violation.	6	Not fully implementing the Facility TSRs/OSRs would directly, and adversely, affect LCO action statements and Surveillance requirements in the OSRs/TSRs and OSR/TSR implementation procedures and would also be of interest from an ISM controls implementation perspective.
07/15/98	OR ALO-LA-LANL-CMR-1998-0029 Title "Expired calibration for continuous air monitor in Wing 5, Room 5120, of CMR facility results in violation of CMR OSRs". Agree with CMR facility on this; this was a TSR/OSR violation. (Note: LANL reported this event as a TSR/OSR violation but indicates in the Appendix F self-assessment report that this is not applicable to Appendix F as an LCO was not violated).	7	Not fully implementing the Facility TSRs/OSRs would directly, and adversely, affect LCO action statements and Surveillance requirements in the OSRs/TSRs and OSR/TSR implementation procedures and would also be of interest from an ISM controls implementation perspective.
07/24/98	OR ALO-LA-LANL-CMR-1998-0031 Title "Operational Safety Requirement (OSR)	8	Not following the Facility TSRs/OSRs would

FUNCTIONAL AREA: ES&H

Discovery Date	Discussion/Occurrence Report	Violation Number	Notes
	Procedure Violation at the CMR Facility." Fire suppression valves that are to be locked open were not locked open. Dave Post in last DNFSB meeting on why we needed CMR upgrades money back spoke about this with SABM present and used this as example of how he is making his personnel make conservative calls on TSR violations. SABM supported Post in this claim. (Note: LANL reported this event as a TSR/OSR violation but indicates in the Appendix F self-assessment report that this is not applicable to Appendix F as an LCO was not violated).		**directly, and adversely, affect LCO action statements and Surveillance requirements in the OSRs/TSRs and OSR/TSR implementation procedures and would also be of interest from an ISM controls implementation perspective.**
04/9/99	**OR ALO-LA-LANL-ACCCOMPLEX-1999-0011. OR indicates that beam scram must occur within 0.25 s specified in OSR surveillance (ref. SR 5.2.5, LCO 5.1.5, BIO Section 4.2.1), report states that total response time for insertion time was NEVER TESTED. When finally tested, SR could not be met by current configuration. Therefore beam was supplied to A6/1L with configuration which inherently could not ever meet surveillance requirement. This is violation of Surveillance SR 5.2.5 and is a TSR violation. (Note: ACCOMPLEX facilities are not within the scope of the FY99 Performance Measures. This TSR/OSR violation is listed for the record and for tracking and trending purposes only.)**	**9**	**Not fully implementing the Facility TSRs/OSRs would directly, and adversely, affect LCO action statements and Surveillance requirements in the OSRs/TSRs and OSR/TSR implementation procedures and would also be of interest from an ISM controls implementation perspective.**

From the perspective of ISM, it is important not only to measure performance but also to track and trend it to supply the ISM feedback function of the 5th ISM step. In particular, once controls have been defined and are in place for the hazards the work is performed and then there is the feedback on how the process (and controls for hazards) worked. To facilitate evaluation of this basic ISM principle, about 100 occurrence reports were reviewed and the trends were plotted starting with the first recorded LANL TSR/OSR ISM control violations in 1993. During the first year that TSR/OSR violations were reported, multiple violations were rolled up into single occurrence reports. It was necessary to revisit these reports to count the number of single violations. The plot is as follows:

FUNCTIONAL AREA: ES&H



From the plot correlation coefficients, it appears that the parabolic fit to the data is not necessarily superior to the linear fit and that rate of TSR violations at LANL is not tapering off significantly. As an ISM feedback tool, this would indicate that the process needs to be further evolved in some manner.

SECTION III:
QUALITY OF AUTHORIZATION BASIS

Assumptions:
For the purpose of this section of the performance measure, an authorization basis is assumed to consist of any of the following:

- *Safety Analysis Report (SAR)*
- *Technical Safety Requirements (TSRs)*
- *Operational Safety Requirements (OSRs)*
- *Final Safety Analysis Report (FSAR)*
- *Preliminary Safety Analysis Report (PSAR)*
- *SAR Update*
- *Basis for Interim Operation (BIO)*
- *Unreviewed Safety Questions (USQs), as they apply to SAR revision*

The facilities to be included in this review include the following facilities in the prescribed order:

- *WETF TA-16, buildings 205, 205A (Cat-2)*
- *TA-18 Kivas 1, 2, 3 & Hillside Vault (Cat-2)*
- *Low Level Radioactive Waste Disposal and Transuranic Waste Storage Facility TA-54 (Cat-2)*

FUNCTIONAL AREA: ES&H

- *TWISP TA-54 (Cat-2)*
- *WCRRF TA-50-69 & 190 (Cat-2)*
- *TA-50-1, TA-50-66, TA-50-90*
- *TSFF TA-21-209 (Cat-2)*
- *TSTA TA-21-155 (Cat-2)*
- *Radiochemistry TA-48-1 (Cat-3)*
- *RLWTF TA-50 (Cat-3)*
- *RANT TA-54-38 (Cat-2)*

The prioritized facility list is subject to change after completion of the joint DOE/LANL facility prioritization exercise. Of these 11 facilities/facility groups, the first 6 will be reviewed prior to June 30, 1999. Reviews of the final five facilities are planned for FY00 pending metric development.

Gradient:

Good:

The Laboratory will perform the following:

- LANL will perform a review of six of the facilities listed above by qualified safety analysis staff. The review will be performed according to the review plan agreed upon by the Laboratory and DOE-LAAO. Each review will be documented in a stand-alone memorandum to DOE-LAAO and Laboratory/Facility management. The DOE will review the first memorandum delivered to LAAO for adequacy. If the review memorandum is considered adequate, the remaining facilities will be reviewed in a similar manner. If the first review is not considered adequate, changes to the review plan will be negotiated between DOE and the Laboratory. All subsequent reviews will then follow the revised plan.
- Strategic Emphasis: After completion of the reviews for each facility, a root cause analysis for systemic authorization basis problems will be performed. The results of this analysis will be issued in report form and will include suggested corrective actions for any problems identified. LANL and DOE-LAAO will negotiate a final set of corrective actions.
- Tactical Emphasis: If during the review of any facility authorization basis a deficiency is identified that could imply an imminent safety problem, DOE-LAAO and facility management will be immediately notified. A memorandum, separate from the review memorandum, will be issued fully describing the deficiency and any suggested corrective actions. Note that action by the Laboratory and DOE-LAAO to address this deficiency is not part of this section of the performance measure. However, this would in no way supersede facility management's requirement to guarantee facility safety at all times and the Laboratory's responsibility to address the situation.

Excellent:

The Laboratory will perform the following:

- The Laboratory will produce and submit to DOE-LAAO a draft cost estimate, schedule, and technical basis for completion of projects to address the corrective actions negotiated with DOE in Section 2 of the review phase titled "Strategic Emphasis." This draft estimate will be based upon the reviews completed by June 30, 1999.

Outstanding:

The Laboratory will perform the following:

- For any imminent safety problem identified in Section 3 of the above review phase during this evaluation period, titled "Tactical Emphasis," the Laboratory/Facility management will implement temporary compensatory measures to guarantee safety of the facility.
- The Laboratory will negotiate with DOE-LAAO on the appropriate corrective actions to be implemented in the long term to address these deficiencies.

FUNCTIONAL AREA: ES&H

- The Laboratory will produce and submit to DOE-LAAO a formal cost estimate, schedule, and technical basis for completion of projects to address these deficiencies.

The assumption required the Laboratory to complete an authorization basis quality review of six facilities in FY99 with the remaining five facilities to be reviewed in FY00. Instead, the Laboratory completed all the reviews in FY99. Nine facilities were reviewed as one facility had no authorization basis document and one facility was double counted on the original facility list. In accordance with the performance measure, a report was issued to include a root cause analysis for systemic authorization basis problems and suggested recommendations to address the problems. A cost estimate and schedule for developing an action plan were provided in the report. An action plan to address the deficiencies identified in the quality review report is a milestone in the FY00 performance measure. One immediate safety concern was identified concerning RLWTF. Corrective action by the facility was proposed and implemented with DOE approval.

While LANL proposed a scoring of 80 points, DOE deemed the product to be Outstanding with 94 points in a memorandum dated October 13, 1999. The 94 points and a weighted score of 31 are based on the following factors. The acceleration of the facility review schedule provided additional data points, hence, a higher level of confidence in the root cause analysis and recommendations. The completion of the facility reviews enables LANL to concentrate on the more important task in FY00 of upgrading facility authorization basis documents. The root cause analysis report with recommendations and the individual facility reports were reviewed by DOE and found to be of high quality. One imminent safety problem was identified and corrected in a timely manner, meeting the first bullet under the outstanding category. While all gradient elements for a scoring of outstanding were not completed, the acceleration of the facility reviews and the high quality of the resultant reports provides ample justification for the outstanding rating.

1.2.g ***Injury/Illness Prevention:*** *To assess the quality and performance of the LANL Occupational Safety and Health Program, injury/illness case data will be collected and analyzed. The goal is to significantly reduce the Total Recordable Incident rate (TRI) and Lost Workday Case rate (LWC) for the Laboratory, as we strive to create an injury free workplace.*
(Weight = 10% Earned = 9.8)

DOE Rating: Outstanding - 98%

Assumptions:

- *For FY99, the performance period is July 1, 1998 through June 30, 1999.*
- *Injury/illness case data includes OSHA TRI and OSHA LWC.*
- *UC employees, LANL contract employees, PTLA, JCNNM are included in the performance measure for FY99. Basic Ordering Agreement (BOAs) subcontractors performing D&D are included in the performance measure for FY99. BOAs performing "new construction" are included in the performance measure for FY99. Task order subcontractors performing ER work are included in the performance measure. Subcontractors performing equipment maintenance are excluded from this measure.*
- *A baseline of injury/illness performance for the period January 1998 through December 1998 will be established for task order subcontractors performing other than office work.*
- *A baseline of injury/illness performance for the period January 1998 through December 1998 will be established for "new construction" competed contracts.*
- *By December 31, 1998, contractual language specifications will be developed for "new construction", ER/D&D, and task order subcontracts to emphasize accident performance. These*

provisions will be included in contracts issued after December 31, 1998, or as contracts are re-bid. These subcontractors will be included in the performance measure beginning January 1, 1999.

- *Five-year goals have been established for the Laboratory utilizing information from "Best in Class" and "World Class" organizations.*
- *LANL's Director will establish a policy commitment by the end of the first quarter that drives toward the established goals.*
- *Rate goals will not be adjusted based on performance.*

Gradient:
TRI rate-CY 1996 Baseline: 5.87
TRI rate FY 1998 Goals:

Period of Performance	Good	Excellent	Outstanding
July 1, 1997-June 30, 1998	5.2	4.9	4.7

Table 1: TRI rate FY 1999-FY 2003 Goals:

FY	Period of Performance	Good	Excellent	Outstanding
99	July 1, 1998-June 30, 1999	4.6	4.1	3.8
00	July 1, 1999-June 30, 2000	4.1	3.4	3.0
01	July 1, 2000-June 30, 2001	3.6	2.8	2.4
02	July 1, 2001-June 30, 2002	3.2	2.4	1.9
03	July 1, 2002-June 30, 2003	3.0	2.25	1.5

LWC rate-CY 1996 Baseline: 3.87
LWC rate FY 1998 Goals:

Period of Performance	Good	Excellent	Outstanding
July 1, 1997-June 30, 1998	3.3	3.0	2.6

Table 2: LWC rate FY 1999-FY 2003 Goals:

FY	Period of Performance	Good	Excellent	Outstanding
99	July 1, 1998-June 30, 1999	2.8	2.3	1.9
00	July 1, 1999-June 30, 2000	2.4	1.8	1.4
01	July 1, 2000-June 30, 2001	2.0	1.4	1.0
02	July 1, 2001-June 30, 2002	1.7	1.1	0.7
03	July 1, 2002-June 30, 2003	1.5	0.9	0.5

*Note: It is recognized that an increase in the injury/illness rates may occur whenever a new prevention program is introduced and that some variability in these rates is expected which may not be indicative of a trend. If gradient goals for TRI and LWC rates are not met, grading will be completed based on specific actions, programs, or policies planned, implemented, and measured for effectiveness. These actions, programs, and policies will demonstrate LANL's commitment to improvement for TRI and LWC rates.

LANL achieved a Total Recordable Incident (TRI) rate of 2.9 and a Lost Workday Case Rate of 1.56 for the performance period. These rates are combined rates for LANL and its primary subcontractors, Johnson Controls Northern New Mexico (JCNNM) and Protection Technologies Los Alamos (PTLA). The rates are significantly better than the goals established for the performance period of 3.8 (TRI) and 1.9 (LWC). LANL aggressively addressed the injury types that have historically driven these rates, sprains/strains and lacerations. The ergonomic program has begun to move into a more proactive mode, and

FUNCTIONAL AREA: ES&H

potential repetitive trauma cases are now being addressed before they become serious. Training in accident prevention for strains (especially back cases), ergonomics, and hazard identification has now reached a significant minority of LANL, PTLA and JCNNM employees. Managers are becoming involved in the accident cause and remediation stages early, and are taking action to prevent recurrence. This is due to integration of injury/illness performance into their performance evaluations under Integrated Safety Management. Additional focus has been seen on the control of injuries associated with construction-like activities.

A complete review of injury/illness records for the fourth quarter of the performance period (second quarter CY99) supports the above statements. The review included 174 LANL records (45 recordable cases, 129 non-recordable cases), 15 JCNNM records (5 recordable cases), and 5 PTLA records (one recordable case). One LANL record was found where a lost time case had not been properly identified, and a second case where the lost time was not reported to the DOE. There were two records where the justification for non-recordability was not adequately provided, and two other cases which may require additional interpretation to determine recordability. Other than this minor quality control, no deficiencies were found. No deficiencies were found in the records maintained by JCNNM and PTLA.

FUNCTIONAL AREA:	**PERFORMANCE ASSESSMENT:**
FACILITIES MANAGEMENT	**Good - 78%**

The University of California, in partnership with Department of Energy, shall plan, acquire, operate, maintain, lease, and dispose of physical assets as valuable national resources. The management of physical assets from acquisition through operations and disposition shall be an integrated and seamless process linking the various life cycle phases. Stewardship of these physical assets during all phases of their life cycle shall be accomplished in a safe and cost-effective manner to meet the DOE mission, and to ensure protection of workers, the public and the environment. This management of physical assets shall incorporate industry standards, a graded approach, and these performance objectives.

Performance Objective #1	**Excellent - 88%**

REAL PROPERTY MANAGEMENT: The Laboratory will effectively manage Real Property.
(Weight = 5% Earned = 4.4%)

1.1 ***REAL PROPERTY MANAGEMENT:*** *Real property is effectively managed consistent with mission, requirements, and DOE direction.* **(Weight = 5% Earned = 4.4%)**

1.1.a ***Program Implementation:*** *Number of completed milestones/milestones scheduled for completion.* **(Weight = 5% Earned = 4.4%)**

DOE Rating: Excellent - 88%

Assumptions:

- *Intent is to measure the effectiveness, completeness, and timeliness of implementation of Real Property management actions. Milestones will be established in partnership with DOE and made a matter of record in the first month of the fiscal year. Milestones may be established for Facilities Information Management System completeness, office space utilization, substandard building space conversion, real property leases, etc.*

Gradient:
Outstanding - 0.90
Excellent - 0.80
Good - 0.70
Marginal/Unsatisfactory - less than 0.70

There are three sub-measures, otherwise called site specific measures or milestones, which are weighted from 0%-3%, and are included in the Real Property Management performance measure. These milestones consist of 1.1.1) Office Space Utilization; 1.1.2) Excess Facilities; and, 1.1.3) Off-Site Leasing Program.

The sub-measure or milestone for Office Space Utilization is weighted at 3%. During FY99, LANL achieved a 2.9% reduction in primary office space utilization from the previous year baseline which amounts to a score of 88% and equates to an excellent. LANL achieved this score as a result of bringing its space utilization closer to the GSA standard from the previous year.

FUNCTIONAL AREA: FACILITIES MANAGEMENT

The sub-measure, which requires LANL to report excess facilities to DOE for submittal to GSA/HUD, was weighted at 0%; this was a track and trend measure. LANL identified a total of fifteen (15) buildings for reporting in FY99. LANL exceeded those expectations by reporting twenty-five (25) facilities for disposition or off-site removal. LANL continues to make progress on reporting of remaining excess facilities. There are approximately 90 excess facilities not reported which LANL hopes to complete by the first quarter of FY00.

LANL consummated three new and one succeeding lease during FY99. The number of lease packages in compliance with GSA guidelines for competition, square footage, and price approved on the first formal review versus the total number of lease packages initiated was weighted at 2%. LANL achieved a score of 2.0. All lease actions were in compliance with GSA guidelines for competition, price, and square footage. This measure was rated outstanding which equates to a score of 90%.

Performance Objective #2	**Marginal - 67%**

PHYSICAL ASSETS PLANNING: The Comprehensive Integrated Planning Process should reflect current and future Laboratory needs. **(Weight = 14% Earned = 9.2%)**

2.1 ***COMPREHENSIVE INTEGRATED PLANNING PROCESS:*** *The Laboratory develops, documents, and maintains a comprehensive integrated planning process that is aligned with DOE mission needs.*
(Weight = 14% Earned = 9.2%)

2.1.a ***Effectiveness of Planning Process:*** *Assess how the planning process is implemented to achieve maximum effectiveness in anticipating and articulating DOE and Laboratory needs.*
(Weight = 14% Earned = 9.4%)

DOE Rating: Marginal - 67%

Assumptions:

- *The Laboratory will work with DOE counterparts in a cooperative effort to continuously evaluate the effectiveness of the comprehensive land-use planning process through the development of Laboratory specific planning elements/milestones. Site specific planning elements/milestones will be made a matter of record in the first month of the fiscal year.*

Gradient:
Outstanding - 0.90
Excellent - 0.80
Good - 0.70
Marginal/Unsatisfactory - less than 0.70

The following were considered in this assessment:

- **FY99 Physical assets planning elements/milestones**
- **Composite score for categories 1, 2, 3 and 4 = (30.6 + 7.0 + 24.75 + 4.95) = 67.30**
- **Category 1: <u>Planning Process Management</u>**

FUNCTIONAL AREA: FACILITIES MANAGEMENT

- **(Category 1 Weight = 45% Earned Score = 0.68 X 45% = 30.6%)**
- **Gradient is the average of parts A + B + C = (0.75 + 0.65 + 0.65)/3 = 0.68**

A. Requirements of Planning Processes are documented. – Good 0.75.

By June 30, 1999, the site planning team agreed to draft and submit for senior management review/approval an official Laboratory document, or modifications to one, that includes roles, responsibilities, and processes of various managers and organizations as related to facility site-wide planning. The decision process used to manage physical assets planning is required to be documented and is to reflect all levels of management involvement in the reviews/decisions.

LANL drafted and issued for review and comment, a draft LIR 210-01-01.0, on Site Planning on June 15, 1999. The LIR includes roles and responsibilities and processes as related to facility site-wide planning. The LIR has not been approved by LANL management as reflected on the CY99 LIR/LPR Improvement/Prioritization Schedule covering the results of the October 8, 1999, meeting among ISM-PO/ESH-DD/OIC. Preliminary DOE review of the LIR that is before the ISMPM for approval reflects a lack of completeness and clarity with respect to the decision process and management involvement/commitment. The site planning group efforts to raise the importance and visibility of the planning effort are commendable. Attempts to formalize the process and obtain LANL senior management ownership are also commendable. LANL approval of the LIR, implementation of the LIR and development of a contractual link between the LIR and Appendix G are considered crucial to the planning effort at LANL.

Performance for this element is rated as Good with a score of 75% in accordance with the gradient negotiated for this element. As noted above, the LIR intended as the "official laboratory document", is not final. It has not been approved by LANL and implementation of the LIR has not been demonstrated to be implemented or in practice by the various LANL organizations/managers.

B. An Approved List of all Construction Projects is Available – Marginal 0.65

A rating of good for this performance element requires; "A senior management approved list by program of all current and next 2-year proposed GPP, expense, and DP/Non-DP Line Item projects shall be documented in the Draft Site Plan.

A senior management approved list by program was not achieved based on the following:

- **An approved LIR is not in place at the end of the performance year**
- **The LIR requires projects to go through the SPCC**
- **Hence the project list appearing in the CSP has not been approved by program and in fact will be undergoing stakeholder (program) at the beginning of FY00.**

Efforts by the LANL planning team to have projects prioritized and categorized are commendable but the results that appear in the site plan do not constitute a list of approved projects. The list of projects appearing in the draft site plan do not all have

program sponsor support. The review and approval of the site plan (if achieved) does not constitute an approved project list. Program sponsor concurrence in the prioritization and categorization of projects reflects a short coming in the achievement by LANL of short term as well as longer term projects that are needed by LANL to meet mission need.

The project list appearing in the site plan for the LANL Weapons Management (WM) program is considered incomplete based on recent presentations by LANL on the WM facility needs for the next 10 years. Preliminary review of the project lists reflects entries that are considered non-projects. Based on the above, performance for this element is rated as Marginal with a numerical score of 65%.

C. An Infrastructure and Program Needs Analysis is Conducted - Marginal 0.65.

To achieve a rating of good LANL was to demonstrate that "an infrastructure and program needs analysis is conducted for the Laboratory DP program and is summarized in the Draft Site Plan."

LANL has not demonstrated that the necessary infrastructure and program needs analysis have been performed by any LANL program nor by the DP program conducted as evidenced by the high-level strategies (only) provided by the LANL WM program. Needs analysis documentation was not provided by any or on any LANL program as required by the FRD and this performance element. LANL's performance is considered marginal for this element with a score of 65%.

Category 2: Planning Process Management Effectiveness

(Category 2 Weight = 7%, Score Earned = 1.00 X 7% = 7%)

This measure is a pass/fail measure. To pass LANL must have completed two benchmarking comparisons and one independent assessment of the LANL facility planning program. Benchmarking efforts and similarly the independent assessment efforts are to consider level of planning management responsibilities, planning processes, planning calendar, and comparisons of site missions with infrastructure investments.

LANL performed the following:

- **One independent assessment conducted by Carroll Thatcher Planning Group September 1999.**
- **The benchmarking effort is limited to two surveys that were conducted with no comparison to LANL performance.**

Performance for this element is rated as Pass with a score of 100%; however, it is a marginal pass.

Category 3: Deliverables and Reporting

(Category 3 Weight = 33%, Score Earned = 0.75 X 33% = 24.75%)

FUNCTIONAL AREA: FACILITIES MANAGEMENT

In order to achieve a rating of Good, LANL was to, "by the end of January of 1999 provide to DOE an action plan/schedule outlining how the final Site Plan will be delivered on or before January 31, 2000 along with the related site planning efforts to the extent developed as of January 1999. Also, a complete Draft Site Plan is available from the planning team by the end of FY 1999."

- **An action plan/schedule outlining how the final site plan will be delivered on or before January 31, 2000 was provided by LANL as required.**
- **A marginally complete Draft site plan was delivered to LAAO on the last day of the performance year. Delivery to balance of stakeholders may be made electronically by October 18, 1999.**

LANL's performance is rated as Good for this element. The site plan has not been through stakeholder reviews and has not incorporated stakeholder comments yet. This was a necessary performance item for a rating of Excellent. LANL's efforts in developing a communication strategy are notable. At the conclusion of the performance year the communication strategy is a draft document. Based on the above, performance for this element is rated as Good with a numerical score of 75%.

Category 4; Data in Support of Physical Assets Planning

(Category 4 Weight = 15% Score Earned = 0.33 X 15% = 4.95%)

To achieve a rating of Good requires the completion of three actions:

- **FIMS data is provided in accord to the FIMS Annual Quality Plan.**
- **LANL will provide DOE an inventory of facility management databases and describe their uses in planning or other program initiatives.**
- **A self-assessment of the CAS Program is provided to LAAO. The assessment should include but is not limited to completeness, accuracy and utilization of the data.**

LANL performed the following:

One of three elements necessary to achieve a rating of good was achieved. Of the required three elements, only the FIMs data deliverable was provided. LANL's performance is rated as Unsatisfactory with an earned score of 33%.

General

Increased LANL management commitment to the site planning function is noted by increased staffing and funding for the planning effort and an increased awareness of the importance and value of site planning was achieved.

Integration and communication of excess facility/D&D facility plans was inadequate. It is unclear if the requirements of LIR 230-01-01.0 were satisfied and if so 5-yr plan objectives are not reflected in the draft CSP nor has the capture of these efforts been communicated during FY99.

FUNCTIONAL AREA: FACILITIES MANAGEMENT

Cancellation of interim site and facilities planning policy issued September 29, 1999, was not made nor has a formal statement been issued that allows more current draft policy to supercede the September 1999 policy.

LANL responsiveness was Marginal with respect to DOE efforts to create a contractual linkage between the DOE site planning functional requirements document and Appendix G of the contract with UC.

Performance Objective #3	**Good - 70%**

PROJECT MANAGEMENT: The Laboratory will complete construction projects within approved budgets and schedules. **(Weight = 33% Earned = 23.1%)**

3.1 ***CONSTRUCTION PROJECT PERFORMANCE:*** *Construction projects greater than $5,000K (regardless of type of funds) achieve schedule and performance objectives.*
(Weight = 20% Earned = 14%)

3.1.a ***Work Performed:*** *Number of milestones completed/number of milestones planned for completion.* **(Weight = 20% Earned = 14%)**

DOE Rating: Good - 70%

Assumptions:

- *The intent is to measure actual progress against that planned for the fiscal year and for the Laboratory to execute projects and cost project funds in a timely manner. A milestone list for all active projects will be negotiated with DOE and made a matter of record in the first month of the fiscal year. Only significant milestones will be listed, but each active project will have at least one milestone per year. By mutual agreement between the Laboratory and DOE, milestones may be weighted for significance, for late/early completion, and/or for improved/diminished scope. Negotiated milestones are not to be interpreted as baseline change approval.*

Gradient:
Outstanding - 1.00
Excellent - 0.95
Good - 0.90
Marginal/Unsatisfactory - less than 0.90

DOE/LAAO reviewed the milestone list as compiled in the LANL self-assessment and disagrees with the inclusion of LANL PID#18645, TA-54, TWISP Dome – New Location. This project was not included on any of the approved milestone lists and was first shown in the June Report from LANL Project Management Division. The milestone scheduled completion date for this project was already known when the June report was prepared. Addition of this project and the completion date were not agreed to by DOE/LAAO and therefore this project should be removed from the final scoring. Based on removal of the TWISP Dome Project, the DOE evaluated score should be as follows:

Total Milestones Planned:	**68**
Number of MS that Meet:	**56**
Number of MS that Exceed:	**15**
Subtotal:	**71**

FUNCTIONAL AREA: FACILITIES MANAGEMENT

Number >60 days late:	**-10**
Total MS Score of Completion:	**61**
Completed to Planned:	**0.90**

This Gradient is equivalent to an Earned Score of 70%, which is in the Good (below midpoint) range. The weight of this measure is 20% and the earned amount is 14%. Two LANL projects, CMRU and NMSSUP, were placed on the Deputy Secretary's Watch List of projects with performance concerns."

DOE/LAAO Comments on LANL Self-Assessment:

The LANL self-assessment notes that the gradient for Good for LANL is 0.90 and for other UC laboratories it is 0.80. In response, DOE points out that for LANL a grace period of 30 days is applied at LANL allowing for extra credit on milestones achieved more than 30 days early. This process also allows for no credit or penalty applied to milestones completed in excess of 30 days late, but prior to 60 days past schedule, and applies an additional penalty equal to the weight of the milestone for those completed in excess of 60 days past schedule. If this feature is not applied at LANL during FY99 to be consistent with other UC laboratories, the score for this measure would have been 56 milestones completed out of 68 scheduled. This would have resulted in a Completed to Planned ratio of 0.82 thereby resulting in a rating of Marginal/Unsatisfactory. DOE/LAAO discussed the use of a grace period for milestone completion with LANL and agreement was reached for FY00 to reduce this grace period to 15 working days and to eliminate the extra credit/penalty approach. The overall objective is to eliminate the use of any grace period by the FY01 rating period. Additionally, during FY00 the LANL gradient for this measure will be consistent with the gradients at the other UC laboratories.

DOE/LAAO also notes the following factual inaccuracies in the LANL self-assessment report:

1. **Reference to milestones being pushed out into FY00 due to funding delays for the Nuclear Materials Storage Facility (NMSF) and Applied Research Optics and Electronics Laboratory (AROES) is not correct. The NMSF project was canceled per mutual agreement between LANL management and DOE after completion of Title I due to increased Total Estimated Cost. AROES is a General Plant Project and funding delays were not experienced during FY99.**

2. **Reference to one milestone being deleted because the Nuclear Materials Safeguards and Security Upgrades, Phase I project being canceled is incorrect. Phase I of NMSSUP was not canceled. Initially scheduled to commence Title I on November 2, 1998, the project was placed on hold by the DASMASO pending the outcome of the following activities: NAE EIA of NMSSUP; DOE/LANL response to Congress on justification for selection of the LLNL developed Argus Control System; LANL demonstration of project readiness to proceed; and Congressional release of FY99 capital funding to commence project execution activities. The project was rebaselined to commence project execution in September 1999 and FY99 performance measure milestones were rescheduled to FY00.**

3.2 ***CONSTRUCTION PROJECT COST:*** *Line-Item projects (including any project $5000K and over regardless of type of funds) meet cost baselines.* **(Weight = 13% Earned = 9.1%)**

FUNCTIONAL AREA: FACILITIES MANAGEMENT

3.2.a ***Total Estimated Cost (TEC):*** *Estimated cost at completion for all active projects/performance measure baseline TEC for all active projects.* **(Weight = 13% Earned = 9.1%)**

DOE Rating: Good - 70%

Assumptions:

- *The intent is to measure Laboratory performance in executing projects within the approved TEC. The performance measure baseline is the original approved baseline adjusted for allowed cost or work scope increases. DOE determines whether cost increases are allowed. The method of calculating estimated cost at completion, including or excluding contingency, will be made a matter of record in the first month of the fiscal year. Contingency and cost reductions will be reflected in the estimated cost at completion. Disposition of pending Baseline Change Proposals, for the purposes of this measure, will be made by mutual agreement. By mutual agreement, projects may be weighted for significance.*

Gradient:
Outstanding - 0.98
Excellent - 0.99
Good - 1.00
Marginal/Unsatisfactory - greater than 1.00

DOE/LAAO reviewed the Performance Measures Baseline Cost (PMBC) and the Performance Measures Estimate At Completion (PMEAC) which do not include contingency and are set at the beginning of the year. The gradient was calculated to be 1.00 which is equivalent to an Earned Score of 70% which is in the Good (below midpoint) range. The weight of this measure is 13% and the earned amount is 9.1%.

DOE/LAAO Comments on LANL self-assessment:

Reference is made to LANL comment "Barriers to Improvement," within milestone 3.2.a regarding the use of PMBC and PMEAC. LANL states that two projects had a combined EAC, including contingency, of approximately $5M to $6M under the TEC. LANL states that if the contingency had been included as part of the overall credits, the performance rating for FY99 would have been improved. However, if the TEC approach had been used and compared with EAC including contingency, there were two other projects whose combined EAC was approximately $15M over the TEC. Utilizing this approach and including these two projects whose EAC w/contingency exceeded TEC would have negated the potential credit described by LANL and most likely would have resulted in an even lower score.

3.3 ***PROJECT DELIVERY COST:*** *Project delivery costs for construction projects greater than $500K are managed effectively.* **(Weight = 0%)**

3.3.a ***Design/Construction Services:*** *Total project delivery costs/total construction costs for construction projects.* **(Weight = 0%)**

Assumptions:

- *The intent is to measure project delivery costs as a percentage of estimated or actual construction costs. Projects to be measured are those with a TEC greater than $500K that are scheduled to*

FUNCTIONAL AREA: FACILITIES MANAGEMENT

complete design and/or construction in FY98. The intent is to measure completed design and construction services costs versus estimated or actual construction costs. Design and construction services costs will be calculated and tracked separately, but consolidated for reporting under this measure. Design services costs to be tracked will include all costs (including burdens, G&A, etc.) associated with the following: Titles I & II Design, Design/Engineering services, Design-phase Project Management, Laboratory Design Review & Support, and all other costs (costs not in one of these categories) directly associated with project design. Construction services costs will include all costs (including burdens, G&A, etc.) associated with the following: Title III Design/Engineering, Construction-phase Project/Construction Management, Construction-phase Laboratory Services & Support, and all other costs (costs not in one of these categories) directly associated with the construction phase of the candidate projects. A mutually agreed list of projects will be made a matter of record in the first month of the fiscal year.

Gradient:
Track and trend.

This is a non-rated measure for FY99 and no formal collection of data was accomplished during the rating period. DOE/LAAO believes LANL could have made better progress in collecting, analyzing, and reporting project delivery costs vs. construction costs. Individual projects should be collecting this type of data as a best management practice. DOE also believes that an institutional perspective must be taken in order to better understand how individual projects contract for design and construction services. Variations in data for this measure are inevitable, since it is dependent upon contractor, contract type, administration of contract (contract management), and project specific technical scope.

DOE/LAAO held several negotiations with LANL during FY99 to determine the type of data to be collected during the FY00 rating period. The end result of these negotiations was the development of a listing of projects and data elements to be collected during FY00. These agreements were documented as performance measure 1.3 as a track and trend. DOE's objective is to obtain data during the FY00 rating period, perform analysis on this data, and initiate a weighted performance measure related to project delivery costs during the FY01 rating period.

Special note is made of the statement in the LANL self-assessment under Performance Result which indicates data is presently being assembled and will be submitted to DOE as an addendum to the third quarter report. DOE/LAAO interprets this statement as referring to documentation of FY00 negotiations - not data related to project delivery costs during FY99.

Performance Objective #4	**Excellent - 82%**

MAINTENANCE: The Laboratory will maintain capital assets to ensure reliable operations in a safe and cost-effective manner. **(Weight = 33% Earned = 27%)**

DOE Rating: Excellent - 82%

4.1 ***FACILITY MANAGEMENT:*** *Facility operations and maintenance are effectively managed consistent with mission, risks, and costs.* **(Weight = 13% Earned = 12.2%)**

FUNCTIONAL AREA: FACILITIES MANAGEMENT

4.1.a ***Program Implementation:*** *Sum of completion percentages for all milestones worked/milestones scheduled for completion.* **(Weight = 13% Earned = 12.2%)**

DOE Rating: Outstanding - 94%

Assumptions:

- *Intent is to measure the effectiveness and timeliness of the Laboratory's facility maintenance program. A list of mutually agreed milestones will be made a matter of record in the first month of the fiscal year. For multiple-facility milestones, completion percentage will be an average of the completion percentages for each facility included in the milestone. If no milestones are selected for the fiscal year, the weight of Performance Measure 4.1.a will be added to Performance Measure 4.2.a.*

Gradient:
Outstanding - 90%
Excellent - 80%
Good - 70%
Marginal/Unsatisfactory - less than 70%

There were 2 milestones that were measured for completion. The milestone related to Appendix E was broken down into 3 subparts and the milestone related to the CMMS implementation was broken down into 5 subparts. CMMS implementation was validated at four facility management units during a work control assessment conducted by DOE/AL in October 1999. Individual milestone/subpart scores are listed below:

Milestone #1 – Appendix E Close-out Issues

1. **The FMUs will verify the Master Equipment Lists (MEL) and the staging migration system updated to be used as input into the CMMS. During the review of MELs equipment classifications will be reviewed for consistency and applicability of the guidance in the O&M Manual. Complete by June 30, 1999.**
   Completion: 98% - (One FMU had not fully completed this by the due date.)

2. **FE-9 (now FWO-FE) will develop guidance regarding equipment classification and publish Laboratory standard equipment Management Levels in the O&M Manual by April 1999.**
   Completion: 60% - (Guidance was developed but had not been reviewed by the FM Council nor issued by the due date.)

3. **The FMUs will review generic Maintenance Procedures utilized in the Maintenance of M2 equipment for adequacy. Any equipment specific or site specific instructions that need to be added to the work package will be developed for inclusion in the CMMS generated PM Work Order. Complete by July 31, 1999.**
   Completion: 94% - (One FMU did not fully complete this by the due date.)

Milestone #2 - CMMS Implementation

1. **Work process reviews (Functional Analysis & Technical Requirements) completed by May 31, 1999.**
   Completion: 100% - (this subpart was completed early on January 29, 1999)

2. **Technical development (Interfaces) completed by July 31, 1999.**
   Completion: 100% - (this subpart was completed early on June 1, 1999)

FUNCTIONAL AREA: FACILITIES MANAGEMENT

3. **Data conversion (MEL, PMs, & Codes) completed by August 31, 1999**
   Completion: 100%

4. **Application testing completed by September 30,1999**
   Completion: 100% - (this subpart was completed early on June 1, 1999)

5. **End user training completed by October 31,1999**
   Completion: 100%

Average % completion 752%/8 = 94%

4.2 ***MAINTENANCE PROGRAM:*** *The facility maintenance program is effectively managed and performed.* **(Weight = 20% Earned – 14.8%))**

4.2.a ***Maintenance Index:*** *Performance index based on EFCOG Maintenance Performance Indicators.* **(Weight = 20% Earned – 14.8%))**

DOE Rating: Good - 74%

Assumptions:

- *A composite index will be calculated using a weighted average for selected performance indicators. The list of performance indicators, and the calculation algorithm will be made a matter of record in the first month of the fiscal year. Performance gradient calculations will consider "Best-in-Class" for comparable Energy Facility Contractors Group (EFCOG) benchmarking participants and the EFCOG average for comparable activities/sites.*

Gradient:
Outstanding - 0.90
Excellent - 0.80
Good - 0.70
Marginal/Unsatisfactory - less than 0.70

There were five measures that made up the index. The scores as validated in this review are as follows:

1. **Proactiveness of Maintenance: This was measured by taking the total dollars spent on predictive and preventive maintenance tasks ($17,962,300) and dividing by the total dollars spent on maintenance (minus management costs) ($42,321,800). These numbers are documented by FMU in their work breakdown structures (accounts) for maintenance. The score for this measure is .42. The value of 80 is given to this measure.**

2. **Total Annual Maintenance Costs: This was measured by taking the total facility maintenance costs ($54,347,000) and dividing it by the total replacement plant value of the facilities ($3,754,650,000). These numbers are documented in the FMU accounts and the Lab's FWO Division. The score for this measure is .014 or a value of 70 per the gradient.**

3. **PMs Completed on Schedule: This was measured by taking the number of PMs completed as scheduled (21,574) and dividing by the total number of PMs scheduled**

(24,257). These numbers were gathered from the Laboratory's Facility Maintenance System databases. The score for this measure is .89 or a value of 80 per the gradient.

4. **Work Control Cycle Time: This was measured by taking the total time of work orders worked and dividing it by the total number of work orders. This was done at each FMU. This was then averaged for the Laboratory as a whole. Average cycle times at the FMUs ranged from a high of 448 hours to a low of 84 hours. The overall average for the Laboratory was 166 hours or a value of 60 per the gradient. It should be noted that the Laboratory failed this measure for two straight years. Most of this is attributed to the preparation of paperwork that is still being required in the work packages such as AHAs and administrative checklists. Equally impacting is conservative Skill of the Craft categories at the Laboratory.**

5. **Plant Stewardship: This was measured by taking the Validated Backlog at the Lab ($75,593,000) and dividing it by the replacement value of the facilities in which the backlog had been validated ($2,647,064,000). The score for this measure is .029 or a value of 80 per the measure's gradient.**

The index score is derived by taking the individual measure's value score (divided by 100) and multiplying it by the weight of that measure. These are then added for the overall score.

0.8(0.2) + 0.7(0.2) + 0.8(0.2) + 0.6(0.2) + 0.8(0.2) = 0.74

Performance Objective #5	**Outstanding - 95%**

UTILITIES/ENERGY CONSERVATION: The Laboratory will maintain a reliable utility system and conserve energy. **(Weight = 15% Earned – 14.2%)**

DOE Rating: Outstanding - 95%

5.1 ***RELIABLE UTILITY SERVICE:*** *Maintain reliable utility service*. **(Weight = 8% Earned = 7.8%)**

5.1.a ***Utility Service:*** *Total number of customer hours of utility service less the number of customer hours of unplanned outages/total customer hours.* **(Weight = 8% Earned = 7.8%)**

DOE Rating: Outstanding - 98%

Assumptions:

- *Unplanned outages that are caused by occurrences outside the boundary of the Laboratory's utility system may be excluded. Utilities to be measured, with assigned weights will be made a matter of record in the first month of the fiscal year. Definition of "customer hours" will be defined separately for each utility measured. A 12-month running average will be reported.*

Gradient:
Outstanding - 99.971%
Excellent - 99.941%
Good - 99.883%
Marginal/Unsatisfactory - less than 99.883%

FUNCTIONAL AREA: FACILITIES MANAGEMENT

The DOE agrees with the rating provided for in LANL's self-assessment. This measure is reflective of the number of power outages and subsequent reliability of the utility services at the Laboratory. During this fiscal year, there were minimal interruptions to the system, thus assuring that the Laboratory operations were not impacted adversely.

5.2 ***ENERGY CONSUMPTION*****:** *Effectively manage energy usage.* **(Weight = 2% Earned = 2%)**

5.2.a ***Building Energy:*** *The reduction in energy usage from FY85 levels in BTUs per gross square feet of building expressed as a percent of FY85 energy usage.* **(Weight = 2% Earned – 2%))**

DOE Rating: Outstanding - 100%

Assumptions:

- *Reduction for FY99 interpolated from the DOE goal of a 30% reduction from FY85 levels by FY05. Utility loads associated with experimental or industrial processes may be excluded from this measure by mutual agreement.*

Gradient:
Outstanding - 25%
Excellent – 22.5%
Good - 21%
Marginal/Unsatisfactory - less than 21%

Building energy use reduction from FY85 levels exceeds the federally mandated goal of 30% for 2005.

5.3 ***ENERGY MANAGEMENT:*** *Energy initiatives are managed consistent with a comprehensive energy management plan.* **(Weight = 5% Earned = 4.4%)**

5.3.a ***Energy Goals:*** *Energy goals accomplished/goals scheduled to be accomplished in accordance with the plan.* **(Weight = 5% Earned = 4.4%)**

DOE Rating: Excellent - 88%

Assumptions:

- *The energy management plan will be made a matter of record in the first month of the fiscal year.*

Gradient:
Outstanding - 0.90
Excellent - 0.80
Good - 0.70
Marginal/Unsatisfactory - less than 0.70

General Note: Plans, lists, and milestones made a matter of record in the first month of the fiscal year may be revised during the year by mutual agreement between the Laboratory and DOE Facility Functional Managers.

The LANL Energy Management staff was instrumental in the incorporation of Sustainable Design and Building Commissioning into the design and construction guidelines for new

FUNCTIONAL AREA: FACILITIES MANAGEMENT

buildings. The Energy Management staff should also be involved during the design and construction of new facilities to assure that energy conservation, sustainable design, and commissioning requirements are implemented. LANL was unsuccessful in implementing Energy Savings projects and LANL must decide on a contracting method for these types of projects. The decentralization of facilities management made the process of implementing national building policies and laws more difficult. Laboratory management must assure that the individual Facility Management Units are aware of national policies and laws and that they accept responsibility for implementing them.

FUNCTIONAL AREA:	**PERFORMANCE ASSESSMENT:**
SAFEGUARDS AND SECURITY	**Outstanding - 91%**

LANL was exceptionally successful in accomplishing all tasks. Many hours of hard work were expended to reach the desired goal. LANL's effort in receiving a Satisfactory rating was a major accomplishment and shows that DOE assets are being properly protected. In accomplishing its mission, LANL's overall score was computed at 89%. LANL's outstanding efforts in addressing the Tri-Lab Security issues, receiving a Satisfactory Rating from the Office of Independent Oversight and Performance Assurance, and hosting over 45 external reviews while continually maintaining an excellent security posture, DOE assigned two additional points to LANL's score to achieve an overall 91% for this functional area. See explanation below.

Tri-Lab Computer Security: To address complex-wide cyber security issues, LANL was heavily involved in responding to the concerns raised by the Secretary of Energy that focused on the level of security for classified and unclassified computer programs. Working closely with DOE, Sandia National Laboratory, and Livermore National Laboratory, LANL worked aggressively to raise the awareness of employees regarding the threat facing cyber security. LANL successfully implemented the 9-Point Plan, which was designed to improve cyber security practices and improve defenses surrounding all computer programs.

Inspection Results: LANL completed a large number of security-related inspections and reviews by a wide variety of external agencies. The sum result of these inspections showed that LANL has a viable security program solidly grounded in strong management and technical solutions. LANL successfully showed that the plans and procedures in place provide a high degree of assurance that classified matter and nuclear material are well protected. The long list of inspections culminated in August by the Office of Independent Oversight and Performance Assurance (OA). That inspection resulted in a facility rating of Satisfactory, evidence that a strong and vibrant security program is in place at LANL.

External Security Reviews: In the wake of the alleged spy scandal, LANL became the focus of intense outside scrutiny regarding perceived security weaknesses and vulnerabilities. Over 45 external visits and reviews were conducted this fiscal year – all intended to ascertain the status of the LANL security program. LANL rose to the challenge of these visits and clearly and effectively dealt with the perception by articulating the real issue and the corrective actions being taken. As a result, LANL earned the praise of a number of agencies in its ability to focus resources and management attention on fixing problems and improving the overall security of the Laboratory. The recent audit rating of Satisfactory showed overwhelming that LANL was not only able to correct deficiencies but was able to do so under intense pressure.

Again, LANL was exceptionally successful in accomplishing all tasks. Many hours of hard work were expended to reach the desired goal. LANL's efforts in receiving a Satisfactory rating was a major accomplishment and shows that the DOE assets are being properly protected. It is important that the Laboratory continue its efforts with the same vigor and sustain this high the level of security at all times. With all the hard work and the many accomplishments in the past year, two additional points are awarded for a job well done.

FUNCTIONAL AREA: SAFEGUARDS AND SECURITY

Performance Objective #1	**Satisfactory - 91%**

ASSESSMENT OF OPERATIONAL EFFECTIVENESS: The Laboratory will work in partnership with DOE to assure effective assessment of Laboratory Safeguards and Security operations consistent with DOE requirements**. (Weight = 30% Earned = 27.9%)**

1.1 ***PERFORMING TO DOE PROTECTION EXPECTATIONS:*** *In order to adequately protect DOE and Laboratory assets, an effective Safeguards and Security Program will comply with Federal, state, and local laws, and all DOE Orders applicable to safeguards and security that have been accepted by the University and the Laboratory under the terms of the contract.* **(Weight = 25% Earned = 23%)**

1.1.a ***Performance Assessment Ratings:*** *The weighted totals of all Operations Office assigned survey ratings by subtopical area or by topical area, where topical areas are not subdivided, during the review period.* **(Weight = 25% Earned = 23%)**

DOE Rating: Satisfactory - 92%

Assumptions:

- *Surveys will be conducted cooperatively between DOE and the Laboratory. Every attempt will be made to reconcile differences jointly at the subtopical area level. Areas not included in the survey due to previous satisfactory performance will be considered satisfactory.*

The assigned multipliers for satisfactory, marginal and unsatisfactory ratings are as follows:

Satisfactory	= 1.0	(all points assigned)
Marginal	= 0.5	(half the points assigned)
Unsatisfactory	= 0.0	(no points assigned)

Each subtopical area or topical area, if the topical area is not subdivided, will be assigned a numeric value or points. The total value of possible points that can be awarded to subtopical areas within a topical area will be equal to the total of "Weights for Topical Areas" below. During the survey process, each subtopical area or topical area, where the topical area is not subdivided, will be assigned a rating of either satisfactory, marginal, or unsatisfactory. A point score will be determined for each subtopical area or topical area, where the topical area is not subdivided, using assigned points and the multipliers above. The calculated points for all subtopical areas or topical areas are added to achieve the weighted raw score for this performance measure.

Weights for Topical Areas

Topical Area	Points
Program Management	20
Protection Program Operations	20
Information Security	20
Nuclear Material Control and Accountability	20
Personnel Security	20

FUNCTIONAL AREA: SAFEGUARDS AND SECURITY

NOTE: AL, LAAO, and UC agreed to use the three tier system for scoring the FY99 performance measures.

Gradient:

Satisfactory: 70% - 100%

Marginal: 50% - 69%

Unsatisfactory: 49%

The AL Safeguards and Security Survey rated four topical areas Satisfactory and one area as Marginal. The overall rating became Marginal, due to an on-going issue regarding storage of resources. With four topical areas and 28 subtopical areas being rated as satisfactory, the overall score for this measure is Satisfactory - 92%.

1.2 ***CORRECTIVE ACTION PLANNING:*** *A deficiency management program will be in place to ensure corrective actions for discovered deficiencies are developed and completed in a timely fashion.* **(Weight = 5% Earned = 4.9%)**

1.2.a ***Corrective Action Plan Completion (DOE)*****:** Percent of on-schedule corrective action plans resulting from Operations Office findings. **(Weight = 5% Earned = 4.9%)**

DOE Rating: Satisfactory - 98%

Assumptions:

- *A corrective action plan will be considered completed at the time the last milestone is completed.*
- *Operations Office findings include the results of HQ/DOE Office of Security Evaluations (OSE) inspections.*
- *When a corrective action plan is dependent upon an action (other than a validation) that must be completed by an outside agency that the laboratory has no direct control over, the subject corrective action will not be tabulated as a part of the overall percentage.*
- *If a corrective action plan has multiple milestones and the final milestone is scheduled for completion on a date beyond the assessment period, credit for the corrective action plan being on schedule will be awarded if the last milestone that is scheduled for completion during this assessment period has been completed on schedule.*
- *Findings that have corrective action plans with milestones that are not due within the assessment period will be assumed to be on schedule and full credit will be awarded for work in progress.*

Gradient:

Satisfactory: 70% - 100%

Marginal: 50% - 69%

Unsatisfactory: 49%

There were a total of 64 DOE approved Corrective Action Plans (CAPS). Of 64 active CAPs, only one did not meet the milestone schedule. These CAPs were developed for DOE findings issued during the AL Security Survey and the Office of Independent Oversight and Performance Assurance Inspection.

FUNCTIONAL AREA: SAFEGUARDS AND SECURITY

LANL improved the tracking process by ensuring timely CAP submittal with only DOE-approved CAPS followed, including modifications. The deficiency tracking coordinator maintains continued diligence and formality of operations. With only one CAP not on schedule out of 64 for FY99, this corresponds to a Satisfactory rating or 98%.

Performance Objective #2	**Satisfactory - 95%**

SELF-ASSESSMENTS: To promote continuous improvement, the Laboratory will conduct Safeguards and Security Program self-assessments and implement corrective actions for self-assessment findings, with the goal of timely and aggressive correction. **(Weight = 30% Earned = 28.4%)**

2.1 ***INTERNAL ASSESSMENTS:*** *The Safeguards and Security Program will perform comprehensive self-assessments of management systems, operational practices and internal controls as defined by applicable topical and sub-topical areas.* **(Weight = 30% Earned = 28.4%)**

2.1.a ***S&S Self-assessment:*** *An effective self-assessment program, meeting the requirements of DOE Order 470.1 Chapter X, shall be in place to identify compliance related deficiencies and to demonstrate progress toward meeting self-assessment requirements of topical and sub-topical areas.* **(Weight = 25% Earned = 23.5%)**

DOE Rating: Satisfactory - 94%

Assumptions:

- *The Safeguards and Security Self-assessment Program, as mutually agreed between the Laboratory and DOE, will address the topical and sub-topical areas reflected in DOE F 5634.1.*

Gradient:

Satisfactory: 70% - 100%

Marginal: 50% - 69%

Unsatisfactory: 49%

In spite of an unusually heavy external review schedule, 30 subtopical areas were assessed to identify improvement areas within LANL's Safeguards and Security Division. A random sampling was conducted of the assessment format, performance testing documentation, completion of actions per schedule, and alignment of self-assessment programs with DOE policy. LANL's self-assessment program meets all requirements of DOE Order 470.1. This area is rated Satisfactory or 94%.

2.1.b ***Corrective Action Plan Completion (Self-Assessment):*** *Percent of on-schedule corrective action plans resulting from internal Laboratory self-assessment findings/issues.*
(Weight = 5% Earned = 4.9%)

DOE Rating: Satisfactory - 98%

Assumptions:

- *A corrective action plan will be considered completed at the time that the action is documented.*

FUNCTIONAL AREA: SAFEGUARDS AND SECURITY

- *Appropriate credit in the annual Operations Office Safeguards and Security Survey will be given in the topical area ratings for self-assessment issues that are being appropriately handled in a timely manner with a documented corrective action plan.*
- *When a corrective action plan is dependent upon an action (other than a validation) that must be completed by an outside agency that the laboratory has no direct control over, the subject corrective action will not be tabulated as a part of the overall percentage.*
- *If a corrective action plan has multiple milestones and the final milestone is scheduled for completion on a date beyond the assessment period, credit for the corrective action plan being on schedule will be awarded if the last milestone that is scheduled for completion during this assessment period has been completed on schedule.*
- *Findings that have corrective action plans with milestones that are not due within the assessment period will be assumed to be on schedule and full credit will be awarded for work in progress.*

Gradients:
Satisfactory: 70% - 100%
Marginal: 50% - 69%
Unsatisfactory: 49%

Forty-five corrective action plans were completed or on schedule for a completion ratio of 98%. One corrective action did not meet the scheduled deadline; however, immediate measures were taken to ensure the plan was complete. This measure was rated as Satisfactory or 98%.

Performance Objective #3	**Satisfactory - 82%**

PROTECTION OF ASSETS: The Laboratory will conduct Safeguards and Security operations to ensure effective protection of national security interests, proprietary information, personnel, property and the general public. **(Weight = 40% Earned = 32.9%)**

3.1 ***Protection of Nuclear Materials:*** *The nuclear materials safeguards and security program shall ensure that nuclear material is protected, is in its assigned location, that any unauthorized removal is detected, and response to anomalies is provided.* **(Weight = 30% Earned = 28.1%)**

DOE Rating: Satisfactory - 93%

3.1.a.1 ***MC&A Physical Inventory:*** *Percentage of items in their stated location and correctly identified, as described in the gradients.* (**Weight = 5% Earned = 4.9%)**

DOE Rating: Satisfactory - 98%

Assumptions:
- *"Authorized Location" is defined by the organization and identified on MASS for LANL and on COMATS for LLNL. An "identified location" for LLNL is synonymous with "authorized location" as used by LANL.*
- *The level of difficulty for LANL and LLNL gradients is equivalent, but the gradients are constructed to reflect differences in inventory operations.*
- *"Correctly Identified" means an item label consisting of the Material Balance Area (MBA), material type and lot identification, or as specified in the currently approved MBA operating procedure. The accounting system and label must agree to be considered correctly identified.*

FUNCTIONAL AREA: SAFEGUARDS AND SECURITY

- *LANL does a working inventory.*
- *During a working inventory, items are allowed to move; therefore, the listing used by auditors may not coincide with the actual location of the item. This is acceptable so long as a transaction on MASS has been performed and the auditor verifies the new location for the item during the course of the inventory.*

Gradient:

Satisfactory: 70% - 100%

Marginal: 50% - 69%

Unsatisfactory: 49%

Significant improvements to the MC&A inventory process produced outstanding results with only 21 of 4,267 items not correctly identified and only 4 of 4,267 items not in their correct location. LANL took proper measures to ensure that nuclear material is protected and in its assigned location. This area is rated Satisfactory - 98%. The Office of Independent Oversight and Performance Assurance commended LANL for having an excellent MC&A Program.

	Items in Authorized Location >99.5%	Items in Authorized Location 99.3 – 99.5%	Items in Authorized Location 99.0 – 99.3%	Items in Authorized Location <99.0 %
Items Correctly Identified >99.5%	98	88	78	<50
Items Correctly Identified 99.3 – 99.5%	95	85	75	<50
Items Correctly Identified 99.0 – 99.3%	92	82	72	<50
Items Correctly Identified <99.0%	<69	<69	<69	<50

"Items in Authorized Location" is that percentage of SNM items in their authorized location on the first inventory attempt. "Items Correctly Identified" is that percentage of SNM items that are correctly identified. No credit for this measure will be given if an SNM item, Category III or higher, is lost from inventory. Loss of an item from inventory is determined at the conclusion of an MBA inventory (to include special inventories).

3.1.a.2 ***MC&A Verification Measurements:*** *Demonstration of meeting verification measurements during physical inventories and reduction in the non-TID and/or poorly measured population.* **(Weight = 5% Earned = 4.2%)**

DOE Rating: Satisfactory - 84%

Assumptions:

- *Verification measurements are those in support of the physical inventory program. Items identified for verification measurements are predetermined based on a Statistical Sampling Plan (Protected Areas as separate populations) as approved by DOE. The Statistical Sampling Plan will define*

sample size and defects in advance of the inventory. Measurement results must fall within accepted and established limits of error.

- *The number and scope of items measured for the purposes of reducing the non-TID and/or poorly measured population is determined by the joint DOE/LANL Safeguards Steering Group. The selection of additional items shall be based on category and attractiveness level (i.e., most attractive items considered before less attractive items).*
- *Measurement of all non-TID and/or poorly measured items at TA-18 shall be completed by the end of FY99. Completing all TA-18 measurements is acceptable for meeting and exceeding the 95/90 confidence level. If TA-18 is predictably unable to complete all measurements in FY99, then the 95/90 confidence level is required.*

Gradient:

Satisfactory:

- Number of verification measurements meet a 95% confidence that 90% of the items are without defects; 480 to 720 additional items (40-60 month average) from TA-55 and CMR populations are measured in support of reducing the non-TID and/or poorly measured population, or as modified by the joint LANL/DOE Safeguards and Security Group

Marginal:

- Number of verification measurements meet a 95% confidence that 90% of the items are without defects

Unsatisfactory:

- Number of verification measurements is less than 95% confidence that 90% of the items are without defects

NOTE: The 84% was based on the MC&A staff conducting 53 non-random measurements per month. If the staff completed 60 measurements per month that would equate to 90%; 70 measurements would equate to 100%.

For TA-55 and the Chemistry Metallurgy Research Facility (CMR), 269 random verification measurements were made with no discrepancies detected, yielding a 95% confidence level that more than 90% of the items were without defects. Additional non-random measurements at T-55 and CMR were made at the rate of over 53 per month for a total of 642 through the end of the year. Also, all measurements for TA-18 to reflect defensible accountability values on the Material Accounting Safeguards System were completed by the end of the year. Since all verification measurements requirements were fulfilled, this area is rated satisfactory or 84%.

3.1.b ***Protected Area Intrusion Detection Capability:*** *Provide assurance that protected area intrusion detection systems will detect unauthorized penetration.* **(Weight = -10% Earned =9.5%)**

DOE Rating: Satisfactory - 95%

Test Program Frequency

	Probability of Detection Results	Annual	Semi-Annual
Satisfactory	90-95	70-94	75-100
Marginal	85-89	50-64	55-69
Unsatisfactory	<84	0-50	0-54

Assumptions:

- *The intent of this measure is to ensure that the Laboratories meet minimum DOE requirements for maintaining a Probability of Detection (PD) of 90%, with a confidence level of 95%. Testing of the system is required annually. The 90% percent PD rate and annual test requirement are set forth in DOE Manual 5632.1C-1, Chapter VI, page 3, para. 4.b.*
- *Using the matrix above, a "Good" score of 20 points would be awarded by achieving a 90%-92% probability of detection (worth 10 pts) and conducting the testing annually (worth 10 pts). Increasing the PD rate, or increasing the confidence in the system by conducting semi-annual tests, results in a higher score and greater assurance that the protected area intrusion detection system will detect unauthorized penetrations.*

Gradient:

Satisfactory: 70% - 100%

Marginal: 50% - 69%

Unsatisfactory: 49%

For a semi-annual test program, 2,220 tests were conducted at TA-18 and 4,890 tests at TA-55 to achieve a 95% confidence level for detection of penetrations. All but two tests at TA-18 and 31 tests at TA-55 on the Protected Area Detection System were performed successfully thus confirming a probability of detection greater than 90%. Based on maintaining a Probability of Detection of 90%, with a confidence level of 95%, this area is rated Satisfactory - 95%.

3.1.c Through negotiations, this measure was deleted from the appraisal.

3.1.d ***Protective Force Alarm Response****: Protective Force response times to SNM alarms will be equal to or less than the calculated time contained in the Site Safeguards and Security Plan (SSSP) vulnerability assessment report*. **(Weight = 5% Earned = 4.6%)**

DOE Rating: Satisfactory - 91%

Assumptions:

- *Alarm response times begin the moment that the alarm response notification is announced regardless of the method or means of making the announcement.*
- *Alarm response elapsed times end when the last required responding officer is in the required position as defined in the SSSP.*
- *Only planned alarm response tests will be used to validate this performance measure.*
- *DOE/Operations Office approved response force time(s), as identified in the approved SSSP vulnerability assessment report (or as approved separately by the DOE Operations Office), are the only time measurement(s) to be used in this measure.*
- *Each laboratory will have specific alarm response scenarios with a specified individual response force time approved for each scenario.*
  - *a. The total number of individual alarm response scenarios will vary according to site-specific requirements of each laboratory and each scenario will be identified in the laboratory's approved SSSP vulnerability assessment report.*
  - *b. The number of alarm responses attempted each year is unlimited after the minimum responses are conducted as required by DOE Order.*

Gradient:

Satisfactory:

- The response time is met 80-100% of the time

Marginal:

- The response time is met 75% -79% of the time

Unsatisfactory:

- The response time is met 75% of the time

LANL performed 41 Alarm Response Assessment (ARAs) in FY99, of which 39 passed successfully. The success rate for this objective is calculated at 91% or Satisfactory.

3.1.e ***Protective Force Training and Performance:*** *The Protective Force will be trained to accomplish its assigned mission.* **(Weight = 5% Earned = 4.9%)**

DOE Rating: Satisfactory - 98%

Assumptions:

- *Statistical sampling, at the 95% confidence level, of Protective Force personnel will be conducted annually. Assessments will use written examinations, oral interviews, LSPTs, and task proficiency examinations to determine a competency rating for the mission requirement relating to Protective Force "Critical System Elements." Critical System Elements will be identified by each Laboratory and their local DOE Office. The Composite Competency Rating is the percent of Protective Force personnel passing the written examinations, oral interviews, LSPTs, and task proficiency examinations.*
- *This measure does not include engagement simulation system enhanced exercises.*

Gradient:

Satisfactory:

- Performance tests and associated assessment techniques demonstrate a composite competency rating of 70% - 100%.

Marginal:

- Performance tests and associated assessment techniques demonstrate a composite competency rating of 50% - 69%

Unsatisfactory:

- Performance tests and associated assessment techniques demonstrate a composite competency rating of < 49%

LANL/PTLA has an overall passing rate of 98% for written examinations, oral reviews, Limited Scope Performance Tests (LSPTs), and task proficiency exams. This corresponds directly to a 100% gradient system and to a performance measure rating of Satisfactory at 98%. Protective Force training examination experience was only 148 failures out of 7,478 tests and examination for a composite success rate of 98%. This area is rated Satisfactory.

3.2 ***PROTECTION OF CLASSIFIED MATTER:*** *Protection programs shall protect and control classified matter from unauthorized access, removal, damage, or destruction through the integration of security equipment, procedures, protective forces, management and supervision into a total system using design basis threat policy and local threat guidance.* **(Weight = 10% Earned = 4.8%)**

FUNCTIONAL AREA: SAFEGUARDS AND SECURITY

3.2.a ***Unauthorized Disclosure of Classified Matter (Compromises) and Infractions:*** *The number of unauthorized disclosures resulting in unauthorized individuals gaining access to classified matter will be maintained at or below the five-year rolling average.*
(Weight = 10% Earned = 4.80%)

DOE Rating: Unsatisfactory - 48%

The number of compromises and infractions exceeded the 4-year rolling average at LANL. FY98 recorded 45 compromises and infractions while FY99 recorded 43. Inadvertent release of classified information through electronic media continues as a significant challenge. Identification of organizations where compromises are more prevalent should assist in focusing training and remediation efforts.

Assumptions:

- A *compromise is determined as a result of an inquiry mandated and articulated in DOE O470.1 and DOE M471.2.*
- *A five -year retrospective rolling average will be established using Laboratory statistics pertaining to unauthorized disclosure of classified matter.*
- *To calculate the gradient score, count all confirmed incidents regarding known compromises and all incidents with a high potential of unauthorized disclosure, compromise, or loss of classified information.*
- *Scoring will not be predicated upon whether an infraction was issued or not, the type of infraction issued, or whether multiple infractions were issued for the same incident.*

Gradient:

Satisfactory:

- The number of compromises is at or as much as 20% below the five-year rolling average.

Marginal:

- The number of compromises is 10% above the five-year rolling average.

Unsatisfactory:

- The number of compromises is 20% above the five-year rolling average.

The number of compromises and infractions exceeded the four-year rolling average at LANL. FY98 recorded 45 compromises and infractions while FY99 recorded 43. Inadvertent release of classified information through electronic media continues as a significant challenge. Identification of organizations where compromises are more prevalent should assist in focusing training and remediation efforts.

* General Note: Laboratory and DOE Safeguards & Security counterparts may establish, by mutual agreement, individual protocols for defining Laboratory-specific implementation and scoring methods for each performance measure. If protocols are used, they will be completed in the first month of the fiscal year. Protocols may be revised during the year by mutual agreement between the Laboratory and DOE Safeguards & Security counterparts.

D. ADMINISTRATIVE PERFORMANCE

FUNCTIONAL AREA:	**PERFORMANCE ASSESSMENT:**
FINANCIAL MANAGEMENT	**Excellent - 86%**

Performance Objective #1	**Excellent - 82%**

CUSTOMER FOCUS AND SATISFACTION: *Financial Management's practices are customer oriented.* **(Weight = 15% Earned = 12.3%)**

1.1 ***METHODS TO EVALUATE CUSTOMER EXPECTATIONS:*** *Maintain systematic methods/programs to collect information and determine internal and external customer needs and levels of satisfaction.* **(Weight = 5% Earned = 4.8%)**

1.1.a ***Effectiveness of Methods:*** *Degree to which effective and systematic methods to collect, document, and use customer feedback information are defined and deployed.* **(Weight = 5% Earned = 4.8%)**

DOE Rating: Outstanding - 95%

Assumptions:

- *Identify internal and external customer groups. Describe what and how information is collected, frequency and methods of collection, and how the finance and budget organizations evaluate and improve their processes for determining customer satisfaction, requirements, expectations, and preferences in support of missions.*

Gradient:
A Good rating is achieved by developing and implementing the capability for systematically obtaining customer feedback.

Factors that will be considered for a higher rating include:

- how well coverage of customer groups is identified
- methods used are effective customer communication tools
- customer learning strategies have continuity and are consistently deployed
- customer feedback is used to improve products/services provided to customers
- frequent/ongoing collection of customer feedback information
- formal processes used to collect, document, and use customer feedback information
- methods used are tailored to customer groups identified
- meaningful customer feedback obtained

An Excellent rating is achieved by demonstrating that a fact-based customer improvement process is used; clear evidence that processes for gathering customer information have been improved over time.

An Outstanding rating is achieved by demonstrating that a very strong, fact-based process is used; strong refinement and integration which is backed by outstanding analysis. Approach is deployed without any significant shortfalls.

DOE validated the results in the self-assessment report. BUS effectively used the following four methods as a means for identifying levels of satisfaction and customer needs for both internal and external customers.

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

- **The Voice of the Customer(VOC), Voice of the Stakeholders (VOS), and Voice of the Employees (VOE);**
- **Appendix F process, requirements, and results;**
- **BUS Distributed Business Teams; and**
- **LANL Checkpoint Survey.**

BUS has effective systematic methods to collect, document, and address customer needs. The following factors were considered when DOE validated BUS's methods and were used to evaluate this measure.

- **How well coverage of customer groups is identified,**
- **Methods used are effective customer communication tools,**
- **Customer learning strategies have continuity,**
- **Frequent/ongoing collection of customer feedback information,**
- **Formal processes used to collect, document, and use customer feedback information,**
- **Methods used are tailored to customer groups identified, and**
- **BUS received the FY99 Quality New Mexico Roadrunner Award in recognition of accomplishments and improvements in its customer focus and satisfaction approach, deployment and results against the Baldrige criteria.**

Based on DOE's FY99 operational awareness activities, other initiatives undertaken by BUS in FY99 that were considered in the evaluation of this measure are as follows:

- **In FY99, BUS responded to a FY98 opportunity for improvement by attempting to further expand the deployment of the VOS and VOC process. LANL developed a survey tailored to the DOE Program Support Offices (PSO) and the LANL program offices. This initiative was not fully implemented in FY99 and was not successful because there were no measurable results. BUS can further enhance its VOS and VOC process by fully integrating participation from the DOE PSO, Laboratory program offices, and UC. This was reported as a repeat opportunity for improvement.**

- **In response to internal customer needs, BUS changed the deployment cycle for the VOC surveys. Consequently, there were no measurable results reported for the VOC customer base in FY99. BUS needs to ensure that it maintains consistency in the survey cycles used to obtain internal/external customer satisfaction results year after year in order to obtain measurable results. This was reported as an opportunity for improvement.**

- **BUS took action in FY99 to address a prior year observation. BUS improved the overall quality of reporting in the FY99 self-assessment report. However, there are still gaps in the write-up for measures 1.1, 1.2, 3.2, and 3.3 that did not fully address BUS's performance against the performance measure criteria, assumptions, gradients, and the areas of focus identified in the FY99 site specific agreements.**

1.2 ***CUSTOMER SATISFACTION:*** *Improved levels of customer satisfaction.*
(Weight = 10% Earned = 7.5%)

1.2.a ***Customer Satisfaction Results:*** *Improved levels of customer satisfaction over time.*
(Weight = 10% Earned = 7.5%)

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

DOE Rating: Good - 75%

Assumptions:

- *Describe most current levels and trends in key measures and/or indicators of customer satisfaction and dissatisfaction.*

Gradient:
A Good rating is achieved by demonstrating that Finance and Budget customers are generally satisfied with the products and services provided.

Factors that will be considered for a higher rating include:

- demonstrated improved or sustained high levels customer satisfaction
- customer satisfaction is maintained across most customer groups
- no general dissatisfaction exists with primary products/services provided

An Excellent rating is achieved by demonstrating that current performance is excellent in most areas of importance to the customers' key business requirements. Most improvement trends and/or performance levels are sustained at very good relative performance levels.

An Outstanding rating is achieved by demonstrating that current performance is outstanding in most areas of importance to the customers' key business requirements with outstanding improvement trends and/or sustained outstanding performance levels.

DOE validated the results in the self-assessment report. BUS was unable to provide results showing improved levels of customer satisfaction over time. This was largely due to changes in the cycles for the internal and external surveys.

- **In response to internal customer needs, BUS changed the survey cycle for the VOC surveys from July 1999 to January 2000. As a result, there were no measurable results reported for the VOC customer base in FY99.**

- **BUS performed the DOE VOS surveys in August 1999. Consequently the survey results were not fully analyzed and action plans were not developed by the end of the fiscal year.**

BUS needs to ensure that it maintains consistency in the survey cycles used to obtain internal/external customer satisfaction results from year-to year in order to obtain measurable results. This was reported as an opportunity for improvement.

The results of the FY99 VOE surveys were considered in measure 4.0, so it was not considered in this measure.

BUS identified on-going initiatives associated with the FY98 VOC survey feedback; however, there was no information that could be used to measure customer satisfaction and/or dissatisfaction.

The prior year opportunity for improvement concerning communication of customer satisfaction results is a repeat improvement in FY99. The BUS Quality Support Office (QSO) needs to ensure that it closes the loop with customers on how identified concerns were prioritized, what actions were taken, and what results were generated from the improvements made during the year. The QSO also needs to communicate and report

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

customer satisfaction results, including satisfaction trends for each primary customer segment, to all customers and to BUS for incorporation into the self-assessment report.

BUS satisfied some of its concerns addressed in a prior year improvement by reporting results for two of the three primary customer segments. However, there were no measurable results reported for the VOC internal customer base, due to the change in the cycle of the surveys. This aspect of the prior year improvement is a repeat in FY99.

Performance Objective #2	**Excellent - 85%**

OPERATIONAL EFFECTIVENESS: *Achieve cost effective and efficient financial management operations by applying available resources to continuous improvement efforts.* **(Weight = 30% Earned = 25.6%)**

2.1 ***LEADERSHIP IN IMPROVING FINANCIAL MANAGEMENT EFFICIENCY AND EFFECTIVENESS:*** *Consistent with DOE requirements and plans, take proactive leadership role to improve the financial management effectiveness and efficiency of the budget and financial processes and the financial reporting systems.* **(Weight = 17% Earned = 14.9%)**

DOE Rating: Excellent - 88%

2.1.a ***Quality Performance in Reporting Processes:*** *Budgets and financial reports and information, analyses, estimates, and proposals submitted will be evaluated for minimal time/form/content deficiencies and incorporate budget validation and other systematic customer feedback.* **(Weight = 5% Earned = 4.7%)**

DOE Rating: Outstanding - 94%

Assumptions:

- *The annual budget process and DOE routine periodic reports will be measured for timeliness and quality by measuring on-time performance. A narrative will describe the continuous process/product improvements, internal process used to validate the estimates including a discussion of the balances between programmatic and distributed budget requirements, and the proactive activities related to this Performance Measure.*

Gradient:

A Good rating is achieved by meeting customer due dates and by demonstrating tangible incremental improvements in these processes and/or in the products developed.

Factors that will be considered for a higher rating include:

- reductions in cycle time and/or cost, automation improvements and initiatives
- proactive activities such as training and development of Financial Management's staff and internal customers, and coordination with other divisions/ organizations to address financial concerns
- customer feedback and other relevant information
- early submission of accurate and complete reports such as MARS/FIS, budgets, and DIMS prior to DOE's due dates
- extent of budget validation, and quality and timeliness of uncosted balance analyses
- quality, depth, and timeliness of major financial analyses and reports

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

An Excellent rating is achieved by demonstrating that current performance is excellent in most areas of importance to the customers' key business requirements. Most improvement trends and/or performance levels are sustained at very good relative performance levels.

An Outstanding rating is achieved by demonstrating current performance is outstanding in most areas of importance to the customers' key business requirements. Outstanding improvement trends and/or sustained outstanding performance levels are achieved in most areas with strong refinement and integration which is backed by outstanding analysis.

Assumptions:

- *The measurement of special ad hoc DOE requests regarding budgets, financial information, analyses, estimates, and proposals submitted will include only formal written requests with deadlines of 8 or more working hours.*

Gradient:
A Good rating is achieved with a 90% on-time performance with acceptable quality as determined from customer feedback.

Factors that will be considered for a higher rating include:

- on-time performance greater than 90%
- good customer feedback
- process improvements, cost, and cycle time reductions
- handling a higher volume or more complex requests

An Excellent rating is achieved by demonstrating that current performance is on time more than 90% of the time, and quality is excellent in most areas of importance to the customers' key business requirements. Most improvement trends and/or performance levels are sustained.

An Outstanding rating is achieved by demonstrating that current performance is on time more than 95% of the time and quality is outstanding in most areas of importance to the customers' key business requirements. Outstanding improvement trends and/or sustained performance levels are achieved in most areas with strong refinement and integration which is backed by outstanding analysis.

DOE validated the results reported in the self-assessment and found only a few minor discrepancies addressed below. Overall, the quality and timeliness of routine and ad hoc financial and budget reporting improved significantly and is considered an area of excellence.

The following factors were considered for a higher rating:

- **Process improvements, and reductions in cycle time and cost reductions,**
- **Proactive activities to provide training and development of the financial management staff,**
- **Early submissions of MARS/FIS submissions, and budgets prior to due dates,**
- **Handling a higher volume and more complex ad hoc requests, and**
- **On-time ad hoc reporting performance greater than 90%.**

Based on the results of DOE's validation, the following actions were also considered in the evaluation of this measure:

<u>Annual Budgets:</u>

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

Office of Defense Programs (DP) - The FY01 DP budget was submitted in a timely manner, with due dates for various schedules being met during the November 1998 through April 1999 time frame. The data provided was of generally high quality but there were some cases where the reports or budget schedules needed to be reworked. LANL was responsive in correcting the discrepancies. There was considerable effort devoted to preparing budget tables showing the Core Stockpile Management Budget distributed by B&R code and also by the Laboratory work breakdown structure, which distributes work by missions as well as facilities at LANL. These comparisons were helpful in reviewing the resource requirements of the Laboratory.

Office of EM - EM budget documents submitted, in general, were excellent for the LANL EM program this year. This includes Waste Management, Environmental Restoration, and Nuclear Materials and Facility Stabilization. The only exception to this was LANL's delay in providing an "Integrated EM Prioritization List." The initial input only prioritized individual programs. LANL delivered a site-wide priority list within a short time frame after DOE advised BUS of the oversight. DOE is satisfied with the agreements made regarding the improvement of communication between the technical and financial staff on the EM budget submission. LANL's EM staff demonstrated a willingness to improve communications between LANL's EM Division and DOE during the formulation and review of program budgets. This was reported as an observation.

Energy Programs/Controller's Budget Call - LANL submitted all of its budget requests for the various Energy Programs as well as crosscut budgets and special purpose schedules to DOE either early or on time. They were also prepared in a quality manner, as expected.

Routine and Ad Hoc Reports:

While the volume of routine financial and budget reports remained fairly constant in FY99, the timeliness results improved from 90% in FY98 to 92% in FY99, with a larger number of early submissions. The minor discrepancy between BUS's 93% timeliness results and the 92% validated by DOE occurred because two routine reports were incorrectly counted by LANL as ad hoc reports.

Both the volume and complexity of ad hoc requests increased in FY99 and included a number of requests received directly from the Headquarter Office of the Chief Financial Officer. BUS exceeded DOE's expectations by improving the ad hoc timeliness results from 90% in FY98 to 100% in FY99.

BUS self-disclosed to DOE an area of concern with respect to the data integrity of the FY99 quarterly foreign travel reports. The frequency and destination of foreign travel was reported inaccurately, due to travel system glitches. A single trip that included foreign and domestic destinations would be reported as only one domestic trip. A single trip to multiple locations would be counted under one foreign destination. DOE's Personnel Security Division and the State Department utilize the foreign travel reports. The reported inaccuracies are linked to the current year security concerns. BUS needs to ensure that it accurately reports to DOE the frequency and destinations of all foreign travel in the quarterly foreign travel report. This issue was reported as an opportunity for improvement.

Actions on Prior Year Issues:

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

DOE reported that BUS's process for disseminating routine and ad hoc financial reporting requirements needed improvement. BUS corrected this action in FY99 by designating a single point of contact for tracking the routine and ad hoc reporting requirements.

DOE reported BUS's internal tracking mechanism for routine and ad hoc requests as an area for improvement. BUS corrected this issue in FY99 by testing the use of I-Track, an internal electronic database, for tracking and reporting all routine and ad hoc reporting requirements. This database will be implemented effective FY00.

DOE reported an improvement in the reporting of corrective actions taken on prior year financial management BMOR issues. BUS demonstrated some improvement in reporting corrective actions. However, not all actions were addressed in the self-assessment report and linked to the prior year findings.

DOE reported an observation concerning electronic submissions of the final self-assessment report to DOE. The BUS QSO took corrective action in FY99 to address this observation by transmitting the self-assessment report to DOE in compatible software.

DOE reported an observation pertaining to the coordination of the final self-assessment report. BUS made process changes in FY99 to address this concern, but still continued to experience coordination problems with meeting the self-assessment report deadline and deliverables in FY99.

2.1.b ***Leadership in Systems Improvements:*** *Degree to which proactive leadership supports DOE and Laboratory initiatives for continued contractor financial systems improvements.*
(Weight = 12% Earned = 10.2%)

DOE Rating: Excellent - 85%

Assumptions:

- *Narrative will describe the Laboratory's progress in support of this criterion, using existing tools and the Financial Management Systems (FMS) plan.*

Gradient:
Factors that will be considered for Good rating include:

- timeliness of the FMS plan
- efforts are directed at initiatives with the most value added
- involvement in DOE's initiatives
- progress towards short-term initiatives

Factors considered for a higher rating include:

- progress towards long-term initiatives
- proactiveness in seeking opportunities for supporting DOE initiatives
- improved capacities, capabilities, and/or cost efficiencies for other financial processes not addressed in Measure 2.2
- positive customer feedback

An Excellent rating is achieved by demonstrating that current financial systems are excellent in most areas of importance to the customers' key business requirements, areas of leadership are shown, with very good relative performance levels.

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

An Outstanding rating is achieved by demonstrating that current performance is outstanding in most areas with significant improvement trends and/or sustained excellent performance levels in most areas. Demonstrate improved capacities, capabilities, and/or cost efficiencies. Strong evidence of industry and comparative leadership is demonstrated in many areas.

DOE validated the results in the self-assessment report. BUS undertook a number of initiatives during FY99 regarding enhancements to various financial systems that are expected to ensure Y2K compliance.

The following factors were considered for a higher rating.

- **Proactiveness in seeking opportunities for supporting DOE initiatives, and**
- **Improved capacities, capabilities, and/or cost efficiencies for other financial processes not addressed in Measure 2.2.**

BUS was proactive in partnering with DOE on seeking opportunities for improving financial systems such as the Business Management Information System, Financial Management Information System, and the EM budget formulation system. BUS also addressed customer issues relating to the Data Warehouse System, and the Resource Planning Module.

BUS implemented the Purchase Card Reconciliation System and installed a Citrix server to support Data Warehouse, the Resource Planning Module, the Invoice Approval System, the Time and Effort, and Travel System.

Programming efforts undertaken during FY99 demonstrated that BUS concentrated on mitigating Y2K issues but was unable to address other long-term financial programming initiatives.

2.2 ***TRANSACTION PROCESSING IMPROVEMENTS:*** *Reduce cycle times and/or costs while improving quality and accuracy for the processes identified.* **(Weight = 13% Earned = 10.7%)**

DOE Rating: Excellent - 82%

2.2.a ***Demonstration of Improvement:*** *Evaluation of improvement trends for processes selected for improvement towards best practices as compared with benchmarking information. Showcase areas of excellence.* **(Weight = 13% Earned = 10.7%)**

DOE Rating: Excellent - 82%

Assumptions:

- *The Laboratory's finance and budget organizations will conduct benchmarking studies every two years. The Laboratory will analyze the benchmarking results and select processes to be measured and improved prior to the next benchmarking study. The Laboratory will present its study findings and areas selected for improvement to its DOE customer for concurrence. Additional improvement processes may be selected in conjunction with the DOE. The Laboratory will also use the benchmarking information to select and demonstrate areas of excellence to feature in its self-assessment. The selected processes will be measured and featured in the annual self-assessments during the two years between benchmarking studies. Where necessary and appropriate,*

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

benchmarking measures will be augmented with qualitative information and other performance indicators for the selected processes.

LANL FINANCIAL MANAGEMENT SUBGAUGES - FY99

	Measured Activities/Sub-Measures Activity/Support Processes		*Gradient*	*Weight of Activity*
2.2.a	*DEMONSTRATION OF IMPROVEMENT*			
2.2.a.1	*Accounts Payable*			
2.2.a.1.a	*Percentage of Discount Dollars Taken*	*Outstanding*	*>94.49%*	*2%*
		Excellent	*89.50 - 94.49%*	
		Good	*84.50 - 89.49%*	
		Marginal	*79.50 - 84.49%*	
		Unsatisfactory	*<79.50%*	
2.2.a.1.b	*Percentage of Vendor Payments Made According to Order Terms*	*Outstanding*	*>94.49%*	*2%*
		Excellent	*89.50 - 94.49%*	
		Good	*84.50 - 89.49%*	
		Marginal	*79.50 - 84.49%*	
		Unsatisfactory	*<79.50%*	
2.2.a.1.c	*AP Cost per Transaction (number of invoice lines)*	*Outstanding*	*<$1.81*	*2%*
		Excellent	*$2.10 - $1.81*	
		Good	*$2.40 - $2.11*	
		Marginal	*$2.70 - $2.41*	
		Unsatisfactory	*>$2.70*	
2.2.a.2	*Payroll*			
2.2.a.2.a	*Payroll Cost per Paycheck*	*Outstanding*	*<$3.06*	*1%*
		Excellent	*$3.35 - $3.06*	
		Good	*$3.65 - $3.36*	
		Marginal	*$3.95 - $3.66*	
		Unsatisfactory	*>$3.95*	
2.2.a.3	*Travel*			
2.2.a.3.a	*Travel Claims Cycle Time - Percent Completed in 1-7 Days*	*Outstanding*	*>87%*	*2%*
		Excellent	*78% - 87%*	
		Good	*68% - 77%*	
		Marginal	*58% - 67%*	
		Unsatisfactory	*<58%*	

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

2.2.a.3.b	*Unit Cost per Travel Claim Processed*	*Outstanding*	*<$22.21*	*2%*
		Excellent	*$25.20 - $22.21*	
		Good	*$28.20 - $25.21*	
		Marginal	*$31.20 - $28.21*	
		Unsatisfactory	*>$31.20*	
	Measured Activities/Sub-Measures Activity/Support Processes		*Gradient*	*Weight of Activity*
2.2.a.4	*Suspense*		*As of 8/31/99*	
2.2.a.4.a	*Net Cumulative Dollars ($k) in Suspense*	*Outstanding*	*<$110*	*2%*
		Excellent	*$209 - $110*	
		Good	*$309 - $210*	
		Marginal	*$409 - $310*	
		Unsatisfactory	*>$409*	

Assumption: The Net Cumulative Dollars in Suspense must be $0 by Fiscal Year End for a Good or higher Rating. If the Net Cumulative Dollars in Suspense is not $0 at Fiscal Year End a maximum score of Marginal will be given

Total Weight for 2.2.a	*13%*

Key Changes to this Measure:

In FY99, DOE and BUS mutually agreed to the following changes to Appendix F that affected how this measure would be evaluated:

1. **BUS implemented a pilot to gauge the gradients for each of the transactional processes based on the model developed at Lawrence Livermore National Laboratory (LLNL).**

   Exhibit 1 of the self-assessment presents the FY99 Appendix F performance expectations for each adjectival rating category. A separate spreadsheet is maintained for each process that depicts the numerical gradient scores for all levels of performance that eliminates the subjectivity in rating this measure.

   The gauge gradients were developed by aligning historical year-end processing results to previously reported DOE BMOR scores, thereby incorporating historical trend data. The gradients were set to allow for achievable future improvement and to establish marginal and unsatisfactory performance levels. Escalation was also considered in establishing the gradients for the cost per transaction measures.

   Under the gauge model, the key measurement date for rating each process was the cumulative year-to-date results as of September 30, 1999. The Suspense measure had

two key measurement dates: August 31, 1999 and September 30, 1999. The August measurement date was designed to measure how well BUS maintained the Suspense account balance as low as possible throughout the year. The September measurement was designed to demonstrate whether the Suspense account was properly cleared to zero at year-end.

2. **The Payroll cost per transaction process was added to this measure. BUS has been internally tracking the Payroll cost per transaction results against the benchmark criteria and has been on maintenance mode for several years. This process has not been measured by DOE since FY97, but it was added back in FY99 in order to provide a better picture of BUS's overall financial processing performance.**

3. **The company used to conduct the FY98 Benchmark Study changed from Institute of Management Accountants (IMA) to Barnett Consulting Inc. (BCI). BCI conducted the FY98 Benchmark Study using the same criteria used in the FY96 IMA Benchmark Study that provided a good basis for comparison.**

Results:

DOE validated the accuracy of the processing results presented in the self-assessment noting two exceptions. The results for the Accounts Payable cost per transaction were misstated and the Suspense results were not fully disclosed.

- **The Accounts Payable cost per transaction of $2.11 was overstated due to a cost that was double counted. Once this error was corrected, the revised cost of $2.08 raised BUS's rating from good to excellent.**

- **The body of the self-assessment did not fully present the Suspense account results in accordance with the gauge criteria. BUS presented quarterly Suspense trends and the results on September 30, 1999. However, BUS did not identify the results on the key gauge measurement date of August 31, 1999. The August results of $372K shown on Attachment 8 of the self-assessment was considered in DOE's evaluation which significantly lowered BUS's rating from the excellent level maintained throughout the year to marginal at August 31, 1999.**

Overall, BUS maintained outstanding performance in the Accounts Payable discounts taken process, and improved the Travel cycle time from excellent to outstanding. BUS continued to maintain excellent performance with respect to the Accounts Payable cycle time and the Travel and Accounts Payable cost per transaction. Even though the Payroll process has not been measured by DOE since FY97, BUS continued to maintain excellent performance with respect to the Payroll cost per transaction. The sustained high levels of performance with respect to the Accounts Payable, Travel, and Payroll processing is considered an area of excellence.

The Suspense gauge model adopted in FY99 changed the way DOE evaluated the Suspense account activity. Instead of looking at monthly trends, the cumulative net dollars in the Suspense account on August 31, 1999 was used as the basis for determining BUS's ability to maintain low Suspense balances throughout the year. BUS maintained excellent to outstanding performance for most of the year. However, the Suspense account unexpectedly spiked on the August 31, 1999 measurement date. This single event lowered BUS overall performance from excellent to marginal. The Suspense

processing gauge was poorly designed because the account balance on the August 31, 1999 measurement date did not capture performance that was representative of the entire fiscal year activity. Therefore the Suspense processing gauge model is considered an opportunity for improvement. BUS agreed to develop proposed revisions to the FY00 Suspense gauge model to provide a more equitable assessment of performance throughout the year.

Actions of Prior Year Issues:

DOE reported an observation in FY98 to enhance the self-assessment report by presenting transactional processing trends. This observation is no longer applicable due to the implementation of the gauge model. Historical trends are now factored into the development of the gauge gradients.

DOE reported an observation in FY98 for internal validation of transaction processing results. This observation was corrected in FY99. The BUS QSO implemented a formal process to validate the contents of the transactional processing results to the Benchmark criteria. DOE validated that the new process was effective. The QSO's validation of this measure discovered an error in the Accounts Payable cost per transaction after the final self-assessment was submitted to DOE. The correct cost of $2.08 was considered in DOE's evaluation.

Performance Objective #3	**Excellent - 82%**

FINANCIAL STEWARDSHIP AND INTEGRITY: *Financial Management's practices provide for financial stewardship, including compliance and data integrity*. **(Weight = 40% Earned = 32.9%)**

3.1 ***COSTS AND COMMITMENTS ARE MANAGED PROPERLY:*** *Ensure that all costs and commitments are within DOE-authorized funding levels and that costs and commitments expected to be in excess of such levels are properly reported and recorded.* **(Weight = 10% Earned = 9.6%)**

3.1.a ***Costs and Commitments are Controlled to Appropriate Funding Levels:*** *Effectiveness of the Laboratory to control costs to B&R Level 9 and control costs plus commitments within authorized major funding levels (Obligation Control Level).*
(Weight = 5% Earned = 4.8%)

DOE Rating: Outstanding - 96%

Assumptions:

- *"Within funding levels" defined as within identified funding in the contract modifications.*
- *"Commitments" are defined as uncosted balances under contracts awarded by the Laboratory that are set aside or encumbered, including purchase orders issued; contracts and subcontracts awarded, including the full liability under lease purchases and capital leases; termination cost for incrementally funded firm fixed price contracts, operating lease agreements, and multi-year service contracts that contain termination clauses; and other agreements for the acquisition of goods and services not yet received and uncosted balances related to other integrated M&O contractor liabilities*
- *Meeting the objective of this performance measure is applicable only at year end for Construction, Operating, and Capital Equipment funds. Line item capital equipment and construction is applicable*

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

monthly. A narrative will be written to describe the Laboratory's performance relative to this measure. The narrative will identify the number of Obligation Control Level (OCL), B&R Level 9, line item capital equipment, and construction funding categories being measured.

Gradient:
A Good rating is achieved by staying within funding levels as defined above.

Factors that will be considered for a higher rating include:
- other proactive activities that improve the effectiveness of the Laboratory to manage and control funds
- controlling costs within funding levels identified in the contract modification for each accounting period

An Excellent rating is achieved by demonstrating a sound, systematic method for managing and controlling expenditures and commitments against funding levels with clear evidence of refinement and improved integration.

An Outstanding rating is achieved by demonstrating a sound, systematic method for managing and controlling expenditures and commitments against funding levels with a very strong, fact-based improvement process and strong refinement and integration.

DOE validated the results reported in the self-assessment. Throughout FY99, BUS's internal procedures were effective in periodically monitoring this type of activity in order to ensure a successful performance at the end of the accounting period. In closing its accounting records at yearend, BUS adequately ensured that all costs were controlled to B&R 9 Levels and cost plus commitments for operating, capital equipment, and construction were within authorized major funding levels (Obligation Control Level).

BUS significantly improved its "Best Business Practices" in effectively monitoring costs and commitments. BUS ensured that all costs were controlled to the B&R 9 level, and costs plus commitments for operating, capital equipment, and construction were within authorized major funding levels. This was reported as an area of excellence.

Another factor that was considered for a higher rating was BUS's ability to control costs within funding levels identified in the contract modification for each accounting period.

3.1.b ***Control of Funds:*** *Evaluation of proactive activities designed for control of funds.*
(Weight = 5% Earned = 4.9%)

DOE Rating: Outstanding - 97%

Assumptions:
- *Narrative describing initiatives.*

Gradient:
A Good rating is achieved by implementing an effective process for mitigating administrative control of funds violations.

Factors that will be considered for a higher rating include:
- process improvements
- control improvements and enhancements

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

– timely notification to DOE of significant changes in projected year-end uncosted balances

An Excellent rating is achieved by demonstrating a sound, systematic method for managing and controlling expenditures against funding levels and administrative control levels with clear evidence of refinement and improved integration.

An Outstanding rating is achieved by demonstrating a sound, systematic method for managing and controlling expenditures against funding levels and administrative control levels with a very strong, fact-based improvement process and strong refinement and integration.

DOE validated the results reported in the self-assessment. BUS continued to be very responsive in partnering with DOE regarding the periodic monitoring and management of uncosted balances. Reporting requirements were consistently met as expected and the contractor was proactive in its efforts to explain and justify to the DOE Headquarters and field offices, and GAO the rationale for retention of such balances.

BUS also increased its efforts to notify AL of any funding shortfalls in a more timely manner (quarterly meetings, daily liaison, etc.) so that the appropriate stakeholders (program offices, budget staffs, etc.) can make informed decisions and that required new funding can be appropriately obtained or funding can be redirected from other sources.

The factors considered for a higher rating include:
- **Process improvements,**
- **Control improvements and enhancements, and**
- **Timely notification to DOE of significant changes in projected year-end uncosted balances.**

BUS significantly improved its "Best Business Practices" in effectively monitoring costs and commitments. BUS ensured that all costs were controlled to the B&R 9 level, and costs plus commitments for operating, capital equipment, and construction were within authorized major funding levels. This was reported as an area of excellence.

3.2 ***FINANCIAL MANAGEMENT PRACTICES:*** *Ensure that financial management and reporting practices fully disclose the results of operations and contain accurate, useful, timely information for program and fiscal management needs.* **(Weight = 15% Earned = 14.4%)**

3.2.a ***Financial Policies, Practices, Data, and Reports:*** *Evaluation of the level to which the Laboratory's financial policies, practices, data, and reports comply with applicable DOE requirements.* **(Weight = 15% Earned = 14.4%)**

DOE Rating: Outstanding - 96%

Assumptions:
- *Provide a narrative description of the effectiveness of financial management practices performed to better manage DOE's requirements, with primary emphasis on accounts or reports identified by the Laboratory and DOE as high risk. The Laboratory and DOE will identify the high risk accounts or reports by October 1 of each fiscal year. As issues emerge during the year, additional accounts or reports may be jointly defined as necessary.*

Gradient:

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

A Good rating is achieved by demonstrated incremental improvement in financial management practices of the high risk areas to ensure that financial practices, policies, data, and reports are consistent with DOE requirements.

Factors that will be considered for a higher rating include:

- results of Government Management Reform Act (GMRA) audited financial statements
- results of Cost Accounting Standards (CAS) Disclosure Statement reviews/revisions
- significant improvement in the financial practices of high risk accounts or processes
- improvement in the financial practices of other low risk accounts while maintaining good practices for high risk accounts
- proactive interaction with DOE with respect to financial management matters
- successes in implementing new FASAB Standards, and DOE accounting and reporting requirements

An Excellent rating is achieved by demonstrating a sound, systematic method for managing professional and regulatory financial information standards with clear evidence of refinement and improved integration.

An Outstanding rating is achieved by demonstrating a sound, systematic method for managing professional and regulatory financial information standards with a very strong, fact-based improvement process and strong refinement and integration.

DOE validated the results in the self-assessment report. The results reported primarily address internal process improvements, self - initiated accounting changes, and proactive activities in support of DOE and external financial management initiatives. However, the report did not address LANL's performance with respect to five of the eight financial areas of focus mutually agreed to in the FY99 site specific agreement.

The three areas of focus that were addressed in the self-assessment report include the Debt Collection Improvement Act (DCIA), DOE's new Treasury wire transfer initiative reported in Measure 3.2, and the Telson budget execution requirement reported under Measure 3.3.

The five areas of focus that were not addressed in the self-assessment report are listed below and based on DOE's FY99 operational awareness activities, LANL met DOE's requirements with respect to those five areas.

- **Success in implementing Statements of Federal Financial Accounting Standards (SFFAS) concepts and standards 4-8,**
- **Accounting for the Environmental Liability,**
- **Partnering with AFSC to resolve FY97 Pricing Review Issues,**
- **Implementation of DOE's New Work For Others Waiver policy, and**
- **Implementation of the revised Statement of Cost Incurred and Claimed (SCIC) Process.**

The following initiatives were also considered for a higher rating:

- **BUS demonstrated its commitment to support external DOE financial initiatives by participating in Functional Cost Peer reviews at three of the ten sites reviewed, and through active involvement in several DOE Financial Management Systems Improvement Council (FMSIC) initiatives. This was reported as an area of excellence.**

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

- **BUS did an outstanding job of keeping DOE apprised of the new and on-going internal accounting initiatives resulting in processing improvements. BUS also maintained an excellent rapport with DOE Functional counterparts on addressing various financial matters. This was reported as an area of excellence.**

- **BUS did an outstanding job improving the content of its CAS Disclosure Statement using the new FAR format and in identifying the resolution of OIG findings in both the old and new CAS formats. This was reported as an area of excellence.**

- **Internal process improvements to the financial practices of low risk accounts while maintaining good practices with respect to the high risk accounts (high risk accounts are defined as the ten areas of focus in the FY99 site specific agreement).**

Based on DOE's FY99 operational awareness activities, other initiatives undertaken by BUS in FY99 that were considered in the evaluation of this measure are as follows:

- **BUS did a good job of using the DCIA Treasury cross-servicing collection process to manage current-year delinquent receivable balances greater than 180 days. However BUS did not aggressively pursue collection and resolution of very old delinquent employee, UC and Isotope receivable balances, by September 30, 1999, as requested by DOE.**

- **There are also unresolved internal control and processing concerns with respect to the delinquent related party and Isotope receivable balances. This issue was reported as an opportunity for improvement.**

- **BUS did not clearly communicate to DOE that its direct funding of special purpose facilities initiative was only a refinement of the existing DOE approved CAS practices and not a cost accounting change before implementing programming changes in FY99. This matter was reported as an observation.**

- **DOE noted concerns regarding the Laboratory's indirect budget process during the ER Baseline and the Product and Service Pricing reviews performed in FY99. The concerns were reported as an opportunity for improvement in the Laboratory Management Appraisal under the Stewardship of Assets measure. However, DOE recognizes that the concerns regarding the Laboratory's Program Organizational Support indirect budget process are programmatic as well as budget formulation issues. Therefore, BUS should share responsibility for ensuring consistency in the formulation of the Program Organizational Support indirect budgets. BUS completed a self-initiated control self-assessment of LANL's indirect budget process in August 1999. Action plans to review indirect budgets and cost pools are scheduled for FY00. The results of these actions are expected to generate improvements to the indirect budget process. This issue was reported as an observation.**

3.3 ***EFFECTIVE INTERNAL CONTROLS AND COMPLIANCE:*** *Provide for effective internal controls and ensure timely and effective resolution of identified weaknesses.* **(Weight = 15% Earned = 9%)**

3.3.a ***Internal Controls and Compliance Process Management:*** *Degree to which an effective system for identifying, reviewing, and correcting (if identified) financial management internal control and compliance processes is maintained.* **(Weight = 15% Earned = 9%)**

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

DOE Rating: Marginal - 60%

Assumptions:

- *Describe and self-assess the internal controls and financial management techniques employed to minimize and mitigate risks for the major financial management processes identified in conjunction with DOE. The Laboratory and DOE will identify areas for self-assessment by October 1 of each year. As issues emerge during the year, additional self-assessment topics may be jointly defined as necessary. To avoid duplication, the finance organization will either self-assess or rely on recent internal or external audits, reviews, or assessments of relevant activities.*

Gradient:
A Good rating is achieved by accurately describing well designed and well deployed systems/processes for managing internal controls and compliance concerns/weaknesses.

Factors that will be considered for a higher rating include:

- a risk prioritization system that demonstrates Laboratory focus on high risk financial management control/compliance areas
- prompt completion of corrective actions
- process improvements
- aggressiveness of corrective action schedules
- effective process for identifying with DOE, annual target areas
- proactive leadership in addressing and correcting internal and external audit findings and concerns related to financial management practices

An Excellent rating is achieved by demonstrating a sound, systematic method for managing professional and regulatory financial risks with clear evidence of refinement and improved integration.

An Outstanding rating is achieved by demonstrating a sound, systematic method for managing professional and regulatory financial risks with a very strong, fact-based improvement process and strong refinement and integration.

DOE validated the results in the self-assessment report with the following exceptions. The self-assessment did not place the appropriate emphasize on the significance of the reported bank reconciliation internal control weakness and the lack of completion of the FSP deliverables in FY99. BUS did not demonstrate that a well-designed and deployed system existed to manage internal controls and compliance concerns.

A FY99 DOE audit finding disclosed that LANL's Accounts Payable, Payroll, and Travel bank accounts had not been reconciled since FY94. This finding demonstrated a systemic and fundamental internal control weakness and the lack of effective management techniques, which placed DOE's funds at risk. Consequently, DOE questions the credibility of LANL's annual Statement of Cost Incurred and Claimed certifications to DOE for FYs 1995-1999. BUS responded aggressively to this finding by devoting significant resources to completing the reconciliations.

However, there are still concerns regarding the effectiveness of internal controls and the role of internal audit oversight. DOE does not have assurance that the root causes leading to this finding have been addressed and the reconciling differences have been resolved. The internal control issue was reported as an opportunity for improvement. DOE's concerns regarding the effectiveness of the internal audit oversight process was

addressed in the Laboratory Management appraisal under the Accountability and Commitments measure.

Due to the extent of the efforts devoted to completing the bank reconciliations, BUS was unable to fully implement DOE's FSP requirements. Some progress was made by updating the control self-assessments for nine financial management processes. However, BUS did not complete the following FSP deliverables, which was reported as an opportunity for improvement:

- **Identification and agreement with DOE of the key financial management controls,**
- **Development and agreement with DOE on a validation plan to test the effectiveness of the key financial management, and**
- **Testing of the key controls to demonstrate that they were in place and effective for FY99.**

Based on DOE's FY99 operational awareness activities there were other initiatives that were considered in the evaluation of this measure. BUS demonstrated proactive leadership in addressing other internal and external audit findings. Some of the significant actions are summarized below:

- **Resolving the OIG CAS Disclosure Statement findings which were considered in conjunction with other proactive CAS efforts as an area of excellence under Measure 3.2.**

- **Resolving a number of unallowable cost issues including DOE's collection policy concerns resulting in the repayment of about $1.2 million of unallowable cost and the development of a draft collection policy that meets DOE requirements. These actions brought to closure a number of issues dating back to 1990 which was reported as an area of excellence in Measure 3.2.**

- **Responding to the GAO finding by closely monitoring the FY99 travel costs against budgets and holding costs under the DOE target level. BUS needs to ensure that travel costs in FY00 are controlled to expected target levels, and the travel provisions of the FY00 Energy Water Development Appropriation are properly implemented. This was reported as an observation.**

- **Partnering with DOE to revise the Work For Other close-out procedures.**

- **BUS made progress in meeting DOE's Telson Fiscal Management requirements by performing a random sample of cost transactions for the first half of FY99. However, BUS needs to complete the testing of transactions for the second half of FY99 and improve the conclusions to address the overall impact of the sampling results to the entire population. This was reported as an observation.**

- **The BUS QSO implemented a formal process in FY99 to validate BUS's quarterly progress against the performance measures. QSO needs to further enhance its internal validation process to ensure that actions taken to address concerns/issues generated during the quarterly meetings are well documented. This process should ensure that the internal validations are completed before the final self-assessment report is submitted. This was reported as an opportunity for improvement.**

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

Performance Objective #4	**Outstanding - 98%**

LEARNING AND GROWTH: Managing the work force in a manner that ensures personnel are qualified and effective. **(Weight = 15% Earned = 14.7%)**

4.1 ***WORK FORCE MANAGEMENT:*** *Develop and maintain an effective Financial Management work force.* **(Weight = 15% Earned = 14.7%)**

4.1.a ***Effective Work Force Management:*** *Evaluation of Financial Management organization and processes resulting in an effective work force.* **(Weight = 15% Earned = 14.7%)**

DOE Rating: Outstanding - 98%

Assumptions:

- *Narrative that describes the Financial Management organization structure, work force development plans, training activities within the Financial Management organization, employee satisfaction, staffing and skills mix plans, strategic planning, and other activities resulting in improving the work force.*

Gradient:
A Good rating is achieved by establishing and maintaining a systematic approach to effective financial work force management.

Factors that will be considered for a higher rating include:
- merging of related functions
- training and development activities of non-financial organizations and other institution-wide initiatives
- major cost and staffing reductions not negatively effecting performance

An Excellent rating is achieved by demonstrating a sound, systematic method for effectively managing the Financial work force with clear evidence of refinement and improved integration.

An Outstanding rating is achieved by demonstrating a sound, systematic method for effectively managing the Financial work force with a very strong, fact-based improvement process and strong refinement and integration.

DOE validated the results in the self-assessment report. The following factors were considered for a higher rating:

- **Proactiveness in addressing employee concerns by establishing the Job Rotation, Mentoring and Employee Development Programs which is reported as an area of excellence,**
- **Implementation of a number of mechanisms to effectively manage the financial workforce which includes training activities, and**
- **Improved employee satisfaction results.**

BUS was very proactive in addressing employee concerns generated from prior year BUS VOE surveys by developing leadership and professional development plans, providing training to the employees based on needs identified in the voice of the employee surveys,

FUNCTIONAL AREA: FINANCIAL MANAGEMENT

and establishing a number of programs that promote communication and recognition for employees. These programs focused on addressing specific employee concerns that have improved morale. This was reported as an area of excellence.

BUS demonstrated that it developed and implemented a number of mechanisms to achieve a sound and systematic method for effectively managing the financial workforce. These mechanisms allowed BUS to evaluate the financial organization and processes that are dependent on the divisional workforce.

In response to employee feedback, BUS changed the cycle of the VOE surveys from July to November that was reported as an opportunity for improvement under Measures 1.1 and 1.2. Even though there were no VOE results reported for FY99, LANL demonstrated improved employee satisfaction levels based on the results reported in the FY99 Checkpoint Survey. The Checkpoint survey indicated an increase in the percent of favorable responses received from BUS employees.

GENERAL ASSUMPTIONS FOR ALL FINANCIAL MANAGEMENT PERFORMANCE MEASURES

Assumptions:

- *Where appropriate incorporate, in the self-assessment, historical trends as the data becomes available.*
- *Laboratory-specific targets identified by end of January of each year contingent on availability of benchmarking results.*

Note: Laboratory-wide cost savings initiatives require the highest level of visibility and Laboratory commitment. For this reason, Performance Objectives, Criteria and Measures (POCMs) addressing cost savings are included in the Laboratory Management POCMs instead of here in the Financial Management section.

FUNCTIONAL AREA:	**PERFORMANCE ASSESSMENT:**
HUMAN RESOURCES	**Excellent - 88%**

Performance Objective #1	**Excellent - 86%**

COST EFFECTIVENESS: The Laboratory will strive to achieve cost effective HR systems and practices. **(Weight = 36% Earned = 30.9%)**

1.1 ***REVIEW AND EVALUATION OF HR SYSTEMS AND PROCESSES:*** *HR systems and processes are reviewed and evaluated in order to optimize the delivery of services with respect to quality and cost.* **(Weight = 11% Earned = 10.5%)**

1.1.a ***Evaluation of HR Systems and Processes:*** *Evaluate HR systems and process improvements and associated results.* **(Weight = 11% Earned = 10.5%)**

DOE Rating: Outstanding - 95%

Agreement:

- The Laboratory will use a variety of techniques that may include internal customer feedback mechanisms, cost benefit analysis, work flow analysis, process mapping, benchmarking, etc., to streamline, reengineer, outsource, or eliminate existing systems and processes or implement new initiatives.

Gradients:

Unsatisfactory:

- Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal:

- Some effort is demonstrated; however, results fall short of the expectations for the "good" gradient.

Good:

- Major HR systems or processes (as defined by the Laboratory) are prioritized for review. Project plans are developed for one or two, and action is initiated.

Excellent:

- As a result of reengineering or other actions, improvements are achieved as evidenced by internal customer feedback, improved cycle times, benchmarking, cost benefit analysis, or comparisons with other organizations which have made similar efforts, cost savings, etc.

Outstanding:

- As a result of reengineering or other actions, significant improvements are achieved as evidenced by internal customer feedback, improved cycle times, benchmarking, cost benefit analysis, or comparisons with other organizations which have made similar efforts, cost savings, etc.

Utilizing a number of sources for collecting customer feedback, HR identified major thrust areas for process improvement. Initially six key processes were identified, reviewed against the HR Strategic Plan, and discussed with DOE. As a result, three were approved by HR management as thrust areas for major attention. The three areas are The Employment Hiring Process, The HR Academy and The Leadership Center. The Employment Hiring Process improvement initiative utilized benchmarking and internal customer feedback to process map and improve the UC regular and limited-term employee hiring process. The HR Academy was developed to systematically address the

development of employees delivering HR services. The Academy utilizes an academic model designed by Dave Ulrich of the University of Michigan. HR Generalists were initially targeted for training. A series of 9 modules were identified through a needs assessment survey, eight of which have been delivered to date. The Leadership Center is a response to customer needs for structured, flexible and high quality development for leaders. The Center consists of a three-part system based on five skills and five behaviors. The skills and behaviors directly support the core competencies of marketing, running the business, finance, human capital, and strategic planning.

These improvements were validated through customer feedback. The Laboratory demonstrated significant achievement in all three areas and earns a rating of Outstanding for this performance measure.

1.2 ***WORKFORCE PLANNING/STAFFING:*** *The Laboratory has an effective, integrated workforce planning system.* **(Weight = 10% Earned = 8.3%)**

DOE Rating: Excellent - 83%

1.2.a ***Workforce Planning:*** *Evaluation of the effectiveness of the Laboratory's workforce planning system.* **(Weight = 5% Earned = 3.9%)**

DOE Rating: Good - 78%

Agreements:

- This measure will consider development and implementation of workforce planning processes and documentation which identify workforce skill requirements and staffing strategies. "Implement effectively," means the degree to which it contains the following elements:

  - Development of a baseline assessment of current workforce composition, jobs and competencies.
  - Analysis of future workforce requirements based on strategic plans, program guidance, budgets, and contract reform strategy.
  - Determination of future workforce composition, jobs, and competencies.
  - Comparison of current workforce composition to future workforce composition to identify shortages and excesses.
  - Training and development programs address and minimize the difference between the internal skills that exist and those that are required to satisfy staffing requirements identified in the workforce planning process.

Gradients:

Unsatisfactory:

- Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal:

- Some effort is demonstrated; however, results fall short of the expectations for the "good" gradient.

Good:

- Development and implementation of workforce planning processes and documentation that satisfy all elements listed.

Excellent:

- Implementation of workforce planning processes (as described in the previous gradient) resolves shortfalls and excesses between current and future workforce composition.

Outstanding:

FUNCTIONAL AREA: HUMAN RESOURCES

- In addition to the above, customer feedback is used for ongoing improvements to workforce planning processes and methodologies.

The Laboratory made tremendous strides in developing an integrated workforce planning system that will assist in identifying workforce skill requirements and effective staffing strategies. Particularly commendable is the web-based information and guidance system that is available on-line to all managers for their use in assessing their current and future workforce needs and provides other tools to assist managers in developing action plans for resolving shortfalls and excesses. This system was introduced after the modifications were made resulting from customer input. A rating of Good is assigned to the Laboratory based on the effective development of workforce planning processes and documentation. A rating of Excellent was not awarded under this performance measure because the Laboratory has not yet implemented the workforce planning system to the extent that it can be credited for resolving shortfalls and excesses between current and future workforce composition. In addition, as acknowledged by the Laboratory, integration of workforce planning into the Laboratory's institutional planning process is just beginning.

1.2.b ***Staffing/Recruiting/Supplemental Workforce:*** *Evaluation of the effectiveness of the Laboratory's system, policies, and procedures for the appropriate, cost effective management of recruiting programs, hiring processes, and supplemental labor workforce.*
(Weight = 5% Earned = 4.4%)

DOE Rating: Excellent - 88%

Agreements:

- Analyses and evaluations will be conducted to determine the effectiveness of the mechanisms utilized to implement workforce planning results. The following areas will be addressed:

  - Acquisition and management of supplemental workforce are cost effective and address workforce planning requirements.
  - Cost effective recruiting programs yield highly diverse and qualified pools of applicants.
  - Rate of job offers accepted to job offers made helps to determine that employment with the Laboratory is desirable.
  - Total cycle time averages from date of job requisition to date of offer letter help to determine whether the employment process is effective

Gradients:

Unsatisfactory:

- Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal:

- Some effort is demonstrated; however, results fall short of the expectations for the "good" gradient.

Good:

- Current Laboratory recruiting/staffing strategies and processes are documented and systems are developed to capture job offer/rejection and job requisition processing information.

Excellent:

- Laboratory recruiting/staffing strategies and processes are benchmarked against like organizations as agreed upon by the Laboratory and DOE.

Outstanding:

- Areas for improvement are addressed and demonstrated improvements are indicated by virtue of better cost effectiveness and improved staffing results.

FUNCTIONAL AREA: HUMAN RESOURCES

A rating of excellent is awarded for this performance measure. The Laboratory conducted extensive benchmarking efforts with organizations agreed to between the Laboratory and DOE. The results of these benchmarking efforts, along with detailed mapping and analysis of the current hiring process resulted in the identification of non-value added processes that could be eliminated and thus reduced cycle time to hire.

With planned hiring moratoriums on the horizon, it is important that the momentum resulting from this process improvement effort not be adversely affected. Many beneficial outcomes are possible if process improvements are fully implemented - not only during the limited external hiring that will take place, but also for internal staffing actions that will in all probability increase in volume and importance.

Demonstrated improvements resulting from the implementation of the benchmarking efforts are being realized but have not yet been fully realized due to limited hiring and full integration of new hiring process improvements.

The Laboratory is commended for its mapping and benchmarking efforts and more importantly, for its efforts to improve the cycle time for hiring new employees and for providing web-based hiring tools to its hiring officials. Continued efforts in these areas should reap benefits to both hiring officials who will be able to staff their positions faster and also to the Human Resources professional staff, who will have more time to provide consultative services rather than concentrating on clerical, transactional personnel processes.

1.3 ***COMPENSATION:*** *Compensation is administered in a cost competitive manner which takes into account market considerations and internal equity.* **(Weight = 15% Earned = 12.1%)**

DOE Rating: Excellent - 81%

1.3.a ***Compensation Increase Plan (CIP):*** *Evaluation of the comprehensiveness and timeliness of Compensation Increase Plan (CIP) proposal.* **(Weight = 4% Earned = 3.5%)**

DOE Rating: Excellent - 88%

Agreements:

- An underlying principle of this measure is that the compensation program is market driven and rewards performance and productivity.

Gradients:

Unsatisfactory:

- Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal:

- Some effort is demonstrated; however, results fall short of the expectations for the "good" gradient.

Good:

- CIP addresses all of the elements specified in the Appendix A and meets the agreed upon time requirements.

Excellent:

- CIP incorporates agreements reached for improvements from the previous cycle's CIP, and identifies early efforts at resolution of any special problem areas.

Outstanding:

- CIP thoroughly addresses all of the elements specified in Appendix A and includes other relevant issues not previously specified, meets or exceeds in the agreed upon time requirements, and the CIP proposal can serve as a model for other organizations.

LANL made a number of improvements to its CIP process and product over the past year. These include use of more surveys for a better market snapshot, improved CIP format and content, plus enhanced coordination and communication with DOE. LANL and DOE also made plans to coordinate on further enhancement to the CIP. A rating of Excellent is earned for this performance measure.

1.3.b ***Review, Evaluation, and Implementation of Compensation System and Processes*** **:** *Evaluation of the Laboratory's compensation program to determine the degree to which it is capable of attracting, motivating, and retaining a quality work force.* **(Weight = 11% Earned = 8.6%)**

DOE Rating: Good - 78%

Agreement:

- To receive credit at the "excellent" level, the Laboratory will benchmark elements of compensation as described in Appendix A, Section III.a.-c.
- In selecting benchmark organizations, the following criteria in addition to FAR Part 31.205-6(b), and DEAR Part 970.3102-2©, will be considered: a) engages in significant R&D activity, b) has a reputation for technical excellence, c) possesses a reputation for managerial excellence, and d) is a recognized leader in their industry.
- To receive credit at the "outstanding" level, the Laboratory must demonstrate the implementation of all compensation program elements stated in Appendix F, Section III.a.-c.
- "Documented" means that philosophies and standards are written and available; policies, guidelines, and instructions on salary management and job classification are readily available for use by employees and managers. Examples include: start salary guidelines, performance management guidelines linking pay to performance, job classification standards and procedures, annual salary review guidance, salary survey information, accountability reporting, and pay scales.
- The Laboratory will identify, prioritize, and select areas for improvement in the context of moving the Laboratory towards best-in-class.

Gradients:

Unsatisfactory:

- Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal:

- Some effort is demonstrated; however, results fall short of the expectations for the "good" gradient.

Good:

- Current Laboratory compensation philosophy, pay strategies, and processes are documented.

Excellent:

- Laboratory compensation program is benchmarked against like organizations as agreed upon by the Laboratory and the DOE.

Outstanding:

- Priority areas for improvement are addressed and demonstrated improvements are indicated by virtue of better cost effectiveness and improved compensation results.

Although LANL has not yet begun the benchmarking process required for the Excellent rating, they have more than completed the criteria for the Good rating as well as having made progress on work contained in the Outstanding category. Implementation of guidelines on establishment of peer groups, and continued refinement of performance

management approaches, were particularly noteworthy. Extensive results achieved in automation of these processes to make them more accessible to employees and more useful for managers were noted also. One area in which progress was slow and somewhat halting was development of non-base incentive compensation approaches for UC executives. A rating of Good is assigned for this performance.

FUNCTIONAL AREA: HUMAN RESOURCES

Performance Objective #2	**Outstanding - 92%**

WORK FORCE EXCELLENCE: The Laboratory will develop and motivate its work force to excel in meeting programmatic needs of the Laboratory and its customers. **(Weight = 16% Earned = 14.7%)**

2.1 PERFORMANCE MANAGEMENT: *The Laboratory has an effective employee performance management system.* **(Weight = 8% Earned = 7.6%)**

2.1.a ***Implementation of Performance Management System:*** *Evaluation of the system that ensures employees are appraised on an annual basis, against pre-established, job-related performance criteria and that they have current development plans that meet Laboratory guidelines.* **(Weight = 8% Earned = 7.6%)**

DOE Rating: Outstanding - 95%

Agreements:

- Baseline of completed appraisals is 95% and current development plans, 75%. Report latest viable data. Percent of completed performance appraisals is determined by dividing the number of completed Performance Appraisals by the eligible population and percent of completed development plans is achieved by dividing the number of completed development plans by the eligible population. A 3% random sample of the completed performance appraisal and development plans will be drawn annually and reviewed by a team of qualified personnel to determine if the performance appraisals and development plans contain all the elements and meet the standards set forth in Laboratory guidelines. Performance appraisal and development plans will not be counted as "completed" unless they include the elements set forth in the Laboratory guidelines. September 1999 data will be used for FY99. Documented evidence of a feedback mechanism to management on the results of the qualitative review is required. The lowest percentage achieved between the quantitative and qualitative scores will determine the awarded gradient.
- For the purposes of this measure, the Laboratory will report senior manager performance appraisals in the subsequent fiscal year data.
- The Laboratory will select the 3% random sample from the performance appraisals and development plans submitted under the new Performance Management System.

Gradients:

Unsatisfactory:

- Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal:

- Some effort is demonstrated; however, results fall short of the expectations for the "good" gradient.

Good:

- 95% on performance appraisal completion and 75% or greater but less than 80% of the 3% random sample contain all the elements and meet the standards set forth in Laboratory guidance.
- 75% or greater but less than 80% on development plan completion and 75% or greater but less than 80% on the 3% random sample contain all the elements and meet the standards set forth in Laboratory guidance.

Excellent:

- 96% on performance appraisal completion and 80% or greater but less than 85% of the 3% random sample contain all the elements and meet the standards set forth in Laboratory guidance.
- 80% or greater but less than 85% on development plan completion and 80% or greater but less than 85% of the 3% random sample contain all the elements and meet the standards set forth in Laboratory guidance, or, 85% or greater on development plan completion and 75% or greater but less than 80%

of the 3% random sample contain all the elements and meet the standards set forth in Laboratory guidance.

Outstanding:

- 97% on Performance Appraisal completion and 85% or greater on the 3% random sample contain all the elements and meet the standards set forth in Laboratory guidance.
- 85% or greater on development plan completion and 85% or greater on the 3% random sample contain all the elements and meet the standards set forth in Laboratory guidance.

LANL attained a completion rate of 98% for performance appraisals for FY99. A random sampling of 3% were reviewed; 91% contained all required elements and met the standards set forth in Laboratory guidelines. HR prepared for the performance management cycle by making program improvements, developing support tools and preparing specific activities for employees and managers. HR activities included performance management training for the HR generalist, performance management toolkit courses, performance management web site, performance management written guidance, performance management just-in-time-lecture, and individualized performance management training offered to Laboratory groups. The Laboratory completed all activities required to meet the gradient of Outstanding for this performance measure.

2.2 ***EFFECTIVENESS OF EMPLOYEE/ LABOR RELATIONS:*** *The Laboratory has effective employee/labor relations programs.* **(Weight = 8% Earned = 7.3%)**

DOE Rating: Outstanding - 92%

2.2.a ***Employee and Labor Relations:*** *Evaluate the effectiveness of the Laboratory's approach in addressing employee and labor relations concerns.* **(Weight = 4% Earned = 3.5%)**

DOE Rating: Excellent - 88%

Agreements:

- As appropriate within their respective area(s) of responsibility, Laboratory organizations that will provide data for this measure will include Employee Relations, the Internal Evaluation Office (IEO), the Ombuds Office and Legal Counsel. The term "employee" means any person who seeks advice or assistance from a listed organization on a "concern" within that organization's scope of authority to address or refer. The term "concern" includes issues that are addressed through defined Laboratory processes administered by the organizations listed. Data will only be reported in a manner which will assure anonymity.

Gradients:

Unsatisfactory:

- Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal:

- Some effort is demonstrated; however, results fall short of the expectations for the "good" gradient.

Good:

- Listed Laboratory organizations conduct analysis of employee concerns by (1) total numbers in issue category defined by each listed organization, (2) issue category outcomes as defined by each listed organization, (3) average cycle times for addressing or referral in issue categories, (4) approximate average cost incurred in addressing or referring within issue category.

Excellent:

- The Laboratory employee relations processes are benchmarked against like organizations.

FUNCTIONAL AREA: HUMAN RESOURCES

Outstanding:

- As a result of analysis and benchmarking, formal management action plans are developed and implemented to improve employee relations.

The Laboratory has multiple offices that deal with employee relations concerns. A Working Group led by HR was established to summarize and analyze employee concerns across all ER functions including Employee Relations, Mediation Center, Ombuds Office, Legal, Employee Assistance Program, and the Internal Evaluation Office. A detailed report was completed and presented to the Senior Executive Team during one of their retreats. The report contains among other things, information about customer services, workload, trends, and the Employee Relations Tracking System. In addition, LANL conducted Benchmarking activities of companies that were agreed to by the Laboratory and DOE. The Laboratory earned a rating of Excellent for this performance measure.

2.2.b ***Employee and Labor Relations :*** *Evaluate the effectiveness of the Laboratory's approach in addressing employee and labor relations concerns. (New addition to 2.2 – this performance measure was negotiated with the contractor after the last contract modification was issued.)* **(Weight = 4% Earned = 3.8%)**

LABOR RELATIONS

Agreements:

- The 1998 State of California Budget Act reflects the request of the Legislature of the State of California that the University of California (UC) establish policies at the Los Alamos National Laboratory for employee-employer relations similar to those set forth in the Higher Education Employee/Employer Relations Act (HEERA) for UC employees within the State of California. The following general components from HEERA are to be addressed in the LANL policy.

    1. Secret ballot elections within appropriate units to determine whether employees wish to be exclusively represented;
    2. Negotiation of agreements between the Laboratory management and employee organizations for whom the majority support has been so demonstrated;
    3. The recognition and protection of employee rights and responsibilities associated with participation in, or refusing to participate in the activities of employee organizations; and,
    4. Neutral, binding arbitration of disputes arising under such policies.

- UC must report the status on action taken to comply with the 1998 State of California Budget Act by March 1, 1999.
- LANL will be evaluated based upon completion of the following actions in accordance with the established timeline*:*

    - May 1, 1999: Establishment of a labor relations functional capability to address the HEERA-like policies and procedures (i.e., allocate resources and endeavor to staff both temporarily and permanently).
    - June 1, 1999: Set up a LANL management "executive steering group" to develop implementation strategies.
    - September 30, 1999: Complete two rounds of employee and stakeholder comment and input (this includes re-draft of policy).
    - September 30, 1999: Demonstrate efforts to communicate employee/employer relations/collective bargaining concepts, policies and procedures to employees and managers.

FUNCTIONAL AREA: HUMAN RESOURCES

- On-going: Work with the California and New Mexico state legislators to move toward closure on the possibility of a legislative mandate of the application of California HEERA coverage to LANL.
- On-going: Keep DOE informed of progress through briefings and discussions at the AL/LANL HR partnering meetings.

Gradients:

Unsatisfactory:

- Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal:

- Some effort is demonstrated; however, results fall short of the expectations for the "good" gradient.

Good:

- Accomplishment of the activities in accordance with timeline identified above.

Excellent:

- Activities are accomplished one month ahead of identified timeline.

Outstanding:

- Activities are accomplished two months ahead of identified timeline.

Assumption:

Evaluation of LANL performance by DOE and UC will recognize factors which are not within LANL's control such as legislative intervention, possible legal challenges resulting in delays in implementation due to litigation, or other stakeholder involvement that results in delays to establishing a HEER-like policy.

The Laboratory successfully met all of the milestones identified in this performance measure two months or more ahead of identified timelines. The partnering efforts with UCOP, LBNL, and LLNL enabled LANL to establish a capable Labor Relations staff on a fast track basis. This resulted in LANL effectively putting into place policies and procedures and systems necessary for addressing collective bargaining at the Laboratory. Particularly noteworthy is the documented effort that was made to communicate employee/employer relations and collective bargaining laws, policies and procedures to employees and managers. LANL earned a rating of Outstanding for this performance measure.

FUNCTIONAL AREA: HUMAN RESOURCES

Performance Objective #3	**Excellent - 85%**

EQUAL OPPORTUNITY: Strengthen the commitment to and accountability for equal opportunity, affirmative action and work force diversity. **(Weight = 20% Earned = 17%)**

3.1 ***EMPLOYMENT OF WOMEN AND MINORITIES:*** *Undertake efforts to promote workforce diversity and improve the representation of minorities and women in the workforce through the development and implementation of workforce diversity strategies and affirmative action "good faith efforts."* **(Weight = 20% Earned = 17%)**

3.1.a ***Employment of Minorities and Women:*** *An assessment of planning and implementation of good faith efforts designed to improve recruitment, selection and retention of minorities and women in high priority underutilized job groups.* **(Weight = 20% Earned = 17%)**

DOE Rating: Excellent - 85%

General Agreements:

1. "High priority" underutilized groups will be selected at the beginning of the assessment period by each laboratory. The following factors may be utilized for the designation of "high priority" areas: underutilization levels, availability levels, projected placement opportunities and typical size and diversity of candidate pools.

2. The Laboratory will provide a results oriented plan(s) with a purpose of improving organizational performance in recruitment, selection, and retention of minorities and women in the selected "high priority" areas. The plan(s) will display the specific actions that will be targeted for achievement during the fiscal/calendar year and assigned responsibilities for those actions. The plan(s) shall incorporate, at a minimum, "good faith" efforts designed to enhance the following:
   - coupling of outreach and recruitment efforts in "high priority" job groups
   - systematic effort to measure and report outcomes and impact of the outreach and recruitment process
   - diversity and viability of candidate pools
   - efforts to educate and sensitize the workforce to diversity awareness
   - integration of diversity issues in Laboratory operations and the daily fabric of Laboratory life
   - active top management support of diversity considerations, including affirmative action and educational outreach efforts
   - representation of minorities as defined in the Laboratory's Affirmative Action Program

   The plan shall include baseline data reflecting the factors utilized in the designation of the high priority job groups.

   1. Assessment Period: The assessment period is October 1 through September 30.
   2. Targeting High Priority Underutilized Groups: High priority underutilized groups will be identified by November 1.
   3. Action Oriented Plan: The Action-Oriented Plan will be submitted by June 30.

Gradients:

Unsatisfactory:

- Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal:

- Some effort is demonstrated; however, results fall short of the expectations for the "good" gradient.

FUNCTIONAL AREA: HUMAN RESOURCES

Good:
Plan Development

- Plan(s) Development -- The Laboratory develops a "results-oriented plan(s)" that clearly communicates the Laboratory's commitment and investment in carrying out its "good faith" efforts to develop strategies and actions to improve employment and retention of women and minorities in "high priority" underutilized job groups. The plan(s) must incorporate, at a minimum, "good faith" efforts as outlined above.
- Plan Execution - Specific actions identified in the plan were carried out substantially in the manner and time frames.
  The Laboratory will summarize how the plan(s) was executed relative to the specific actions taken to improve recruitment, selection and retention of women and minorities. The summary should include a narrative describing the efforts taken, and any significant outcomes or events resulting from the process. The summary should also include statistical analyses assessing the plan's effect on the representation of minorities in candidate pools, interviews, placements, and attrition in the specified job groups.

Excellent:

- In the aggregate, underutilized job groups show improvement toward full utilization or remain at the same level of utilization.

Outstanding:

- In addition to the criteria for Excellent, improvement toward full utilization is achieved for each designated high priority job group and full utilization is achieved in 50^ of the high priority job groups.

LANL demonstrated improvement toward full utilization in every high priority group for women and for minority non-management TSMs while maintaining a 99.9 percent utilization of minority officials and managers. Comparing beginning and ending FY99 ratios of minority percentages to weighted average availability shows an overall gain in minority high priority categories of 2.6 percent from 89.3 percent to 91.9 percent. Overall, the high priority areas for women showed a net gain of 9.4 percent including a 1.4 percent gain in officials and managers, a 6.6 percent gain in 2.a-TSMs, and a 1.4 percent increase for technicians. All data was verified along with the process of collecting and maintaining support information. As a result, the Laboratory earned a rating of Excellent for this performance measure.

Performance Objective #4	**Excellent - 88%**

CUSTOMER NEEDS: Human Resources identifies, evaluates and responds to customer needs.
(Weight = 14% Earned = 12.3%)

4.1 CUSTOMER NEEDS ANALYSIS: *Requirements, expectations and preferences of customers are collected and addressed. Strategies to evaluate and anticipate needs are in place.*
(Weight = 14 % Earned = 12.3%)

4.1.a ***Customer Needs Input Strategy:*** *Evaluation of customer input mechanisms, implementation strategies, and response.* **(Weight = 14% Earned = 12.3%)**

DOE Rating: Excellent - 88%

Agreement:

FUNCTIONAL AREA: HUMAN RESOURCES

- Mechanisms will be used to gather customer input regarding HR practices. Practices could be policies, services, programs, systems, processes and procedures. These mechanisms are varied and could include customer surveys, focus groups, customer feedback forms, etc. Measurement will include the extent of utilization of customer input in improving HR practices and will include closing the loop with the customers. Measurement deliverable will be a narrative description of how the Laboratory addresses the performance criterion and objective.

Gradients:

Unsatisfactory:

- Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal:

- Some effort is demonstrated; however, results fall short of the expectations for the "good" gradient.

Good:

- Internal and external input mechanisms exist and are utilized to evaluate and improve human resources practices. Input and any changes to practices, whether resulting from feedback or not, are communicated to the customer, as appropriate.

Excellent:

- Internal and external customer requirements, expectations and preferences are collected and utilized to evaluate and improve the information sought from customer feedback mechanisms and the frequency of collection is clearly defined. New or changes to existing practices are clearly linked to feedback results as well as the Laboratory's strategic direction and communicated to the customers, as appropriate.

Outstanding:

- In addition to the items identified under "Excellent," other data such as industry standards, utilization of services and operational effectiveness indicators are collected and taken into consideration. Furthermore, Human Resources evaluates and improves its processes for determining customer requirement, expectations and preferences.

LANL aggressively sought and utilized internal and external customer requirements, expectations, and preferences to evaluate HR services and products in FY99 in order to further improve the information data collection process for FY00. This was clearly demonstrated throughout the BMOR review. HR Division-wide assessments and group-specific customer feedback mechanisms are clearly defined and linked to feedback results which are directly tied to the HR process and product improvements. Changes resulted in improvements which were demonstrated in the areas of the HR systems and processes; workforce planning, staffing and recruiting; review, evaluation and implementation of compensation process; and effectiveness of employee/labor relations. A gradient score of Excellent was assigned for this performance measure.

Performance Objective #5	**Outstanding - 95%**

HR LEADERSHIP IN DEPLOYING MISSION/BUSINESS STRATEGY: The Laboratory aligns its HR plan with the Laboratory strategic or institutional plan and supports the principle of the DOE contractor HR strategic plan. **(Weight = 14% Earned = 13.3%)**

5.1 ***ALIGNMENT OF HR PROGRAMS:*** *HR and Diversity programs and policies are aligned with Laboratory strategic directions.* **(Weight = 14% Earned = 13.3%)**

5.1.a ***Deployment of Strategy:*** *Evaluation of the HR strategic planning process that addresses alignment of HR programs and practices with the Laboratory's strategic direction and the well being of the Laboratory's employees. Measurement will also include the strategy to*

communicate with employees, supervisors and managers regarding HR programs and practices.
(Weight = 14% Earned = 13.3%)

DOE Rating: Outstanding - 95%

Agreement:

- Measurement Deliverable: Narrative description of the above.

Gradients:

Unsatisfactory:

- Little or no effort has been demonstrated towards achievement of the performance measure.

Marginal:

- Some effort is demonstrated; however, results fall short of the expectations for the "good" gradient.

Good:

- Documented plan to align H.R. systems and processes with the Laboratory's business needs. Documented communication strategy.

Excellent:

- Evidence of plan implementation.

Outstanding:

- Evidence that plan has positive impact on the mission and business strategy.

HR prepared a comprehensive Strategic Plan that is in alignment with Laboratory strategic directions. The Plan was prepared with input from internal and external customers and contains numerous initiatives that address key focus areas identified by the Director. Major accomplishments in this area include products and process improvements in workforce planning, leadership training, labor relations, and compensation practices; establishment of new Salary Management System; documentation of compensation practices and making the information available to all employees on the HR Web page; reengineering of the hiring process; submittal of Complaint Resolution Policy, AM111 to UC for approval after incorporating employee input; and establishment of HR Academy and Leadership Center. All of these initiatives helped position HR as an important strategic partner with top management at the Laboratory. The Laboratory demonstrated significant achievement in this area and earns a rating of Outstanding for this performance measure.

FUNCTIONAL AREA:	**PERFORMANCE ASSESSMENT:**
INFORMATION MANAGEMENT	**Outstanding - 91%**

Performance Objective #1	**Outstanding - 90%**

INFORMATION MANAGEMENT PROGRAM: The Laboratory manages information resources on a corporate basis to improve the quality of its products, to add value to scientific programs and customer services, and to improve the Laboratory's work processes. **(Weight = 100% Earned = 90%)**

1.1 ***OPERATIONAL EFFECTIVENESS:*** *The IM program provides cost-effective products and improved services.* **(Weight = 30% Earned = 27.0%)**

1.1.a ***Operational Effectiveness:*** *Evaluation of measurable improvements and cost-effective operations.* **(Weight = 30% Earned = 27.0%)**

DOE Rating: Outstanding - 90%

Assumptions:

- *Measurement deliverable - description of the information management program's accomplishments which have resulted in measurable improvements in the provision of cost-effective products and services. The description may be accomplished through reference to accessible work products or other existing Laboratory documentation.*
- *"Operations" means the delivery of products and services.*

Gradients:

Good:

- Examples that demonstrate measurable improvement and cost-effective, IM services and products.

Excellent:

- Demonstrated results which contribute to institutional cost-efficiencies, savings, and improved operations.

Outstanding:

- External recognition of operational effectiveness or benchmarking that indicates best-in-class performance.

A rating of Outstanding was achieved with a score of 90% assigned for receiving external recognition for operational effectiveness or benchmarking that indicates "best-in-class" performance. A number of initiatives pursued this FY resulted in outstanding improvements to the quality of products, customer services, and/or Laboratory work processes. Improvement could be realized by closely tracking initiatives, reporting planned against actual costs, and identifying how services were improved as a result of implemented changes.

Network Firewall External recognition was received from the DOE, Office of Independent Oversight and Performance Assurance (OIOPA) for implementing a restrictive network firewall. Operational effectiveness was improved by splitting the unclassified network into unclassified-protected (blue) and unclassified-open (green) partitions. This split better positioned the Laboratory to respond to and implement the Secretary's Cyber Security Plan. The team not only received a Distinguished Performance Award from the

LANL Director for their technical contributions but also recognition from DOE Headquarters. To quote George Armstrong, OIOPA, "Our firewall expert, and he is an expert, was not able to penetrate into the blue partition. It appears to be a well designed firewall. The use of commodity routers and proxy servers in the manner in which LANL is doing is very innovative–LANL appears to be ahead of the other labs in this area." The Laboratory's computer security posture was significantly strengthened. In summer 1999, the I&E found 'insider' vulnerabilities in the network. Within three months, the Laboratory quickly reacted to and corrected all vulnerabilities.

Library Without Walls Library Without Walls continues to be "best-in-class" and corporately adds value to scientific programs while improving customer productivity and services. The project was designated as a User Facility that allows for partnerships with external customers and offers potential technology exchange. Participation in the New Mexico Library Services Alliance allows for collaboration and cooperation in purchasing electronic journals. The Laboratory is currently providing digital access to 10 DOE laboratories and research centers; 10 Air Force research facilities and bases; and Stanford, New Mexico, New Mexico State, and New Mexico Tech universities. The Library was featured in ONLINE magazine and recognized for its cutting-edge, customer-driven services and the Los Alamos Monitor for opening information doors. During FY99 the Library hosted 11 external visits, including one from South Africa. Library usage is up, growth includes external customers, effectiveness is gained through sharing, and costs continue to decline. Metrics are closely tracked and monitored to ensure cost-effective products and services are delivered and operational performance improved.

Awards The Laboratory received multiple awards from outside sources for its editing and design work. These contributions bring credence to achieving an Outstanding rating in the area of operational performance. Only a few of the accomplishments cited in the self-assessment are listed below but all improve the quality of the Laboratory's products and services—many at a reduced cost. Winning these awards is indicative of the innovation and creativity found within the Laboratory to add value to scientific programs, improve customer services, and establish a baseline from which others may benchmark.

- ***R&D 100 Award*—In its search for providing customers with informative yet cost-effective communication products, the Laboratory submitted 17 entries to the R&D 100 Award, an international competition. R&D Magazine sponsors a search for the top 100 technical innovations of the year. Of the Laboratory's 17 entries, seven won prestigious awards.**

- ***Society for Technical Communication*—This organization sponsors annual state, regional, and international competitions. At the state level, the Laboratory received technical publication awards for 13 of 19 entries; won technical art awards for 12 of 29 entries; and six out of seven entries won on-line communication awards. LANL received "Best of Show" in both the art and publications competition of which five entries will go on to international competition.**

- ***International Technical Publications Competition*—Two of the Laboratory's entries won the Society for Technical Communication's highest award. Both the *Laboratory Directed Research and Development* progress report and the *Nuclear Weapons Technology: Focus on the Stockpile* brochure won Awards of Distinguished Technical Communication.**

FUNCTIONAL AREA: INFORMATION MANAGEMENT

- ***Graphic Design: USA magazine*—Designers won four American Graphic Design Awards for several posters and a brochure.**

- **40th Annual International Cinema in Industry (CINDY)—The video imaging team won two gold CINDY awards, one in the recruiting category and the other in the museum category.**

Compact Disc (CD) Usage The publishing group was extremely active in encouraging customers to develop more cost-effective products while meeting publishing needs. Cost efficiencies were achieved when several publications were produced in CD form rather than paper. Other publications, needed in hardcopy and CD, brought about a small change in Laboratory culture. Laboratory attention and support to this effort potentially could offer substantial cost savings.

- ***Reports Compilation*—Placing a series of paper reports on CD saved $71 per copy. With each reprint at least $177 per copy will be saved. Elimination of printing chemicals and volumes of paper lent to a 38% cost avoidance over hardcopy printing.**

- ***Munitions Report*—Placing the report on a CD eliminated a publication of over 53,000 pages of hardcopy text.**

- ***Science and Technology Assessment*—Using CD for Volume I, the number of pages printed was reduced by 65%; Volume II, 72%. Capturing the text on CD also eliminates the shipping costs in distributing the report.**

1.2 ***CUSTOMER FOCUS:*** *IM products and services meet customer requirements.*
(Weight = 30% Earned = 28.5%)

1.2.a ***Level of Customer Satisfaction:*** *Evaluation of customer satisfaction reviews and implementation of activities toward improvement.* **(Weight = 30% Earned = 28.5%)**

DOE Rating: Outstanding - 95%

Assumptions:
- *Measurement deliverable - results of the customer satisfaction reviews.*

Gradients:
Good:
- A systematic approach to the measurement of customer satisfaction. Evidence of meeting commitments to customers' requirements.

Excellent:
- Cost effective and/or innovative approaches to measuring customer satisfaction, customer involvement throughout life cycle of information management activities, and evidence of improvement in customer satisfaction.

Outstanding:
- Sustained high level of customer satisfaction.

A rating of Outstanding was achieved with a score of 95% assigned for sustaining a high level of customer satisfaction. The Laboratory has an established approach to measuring customer satisfaction, offered innovative ways to collect customer data, and provided

evidence for delivery of products and services meeting customer expectations. Performance could be improved by standardizing an approach that would consolidate "best practices" from each of the CIC groups.

Survey and Metrics System Most impressive this FY was the development of an innovative web-based tool from which non-programmers can design and deploy customer satisfaction surveys. The need for such a tool was identified by customers, recognized as an opportunity to improve operational performance, and implemented as a quality initiative in response to the customers' voice. The tool was used by various Laboratory organizations, offered to DOE for its use, and used to collect data for this year's Baldrige Assessment.

Customer Satisfaction Data Information Management (IM) functions primarily reside within and are the responsibility of CIC. Each group within CIC has a methodology for measuring and tracking customer satisfaction levels. While varied in their approach, all spend an extraordinary amount of time preparing customer surveys, collecting and analyzing respondents' data, tracking results, and implementing the never-ending changes to meet customer requirements. Examples are provided below. As referenced above, the Survey and Metrics System was made available this FY to automate the data collection processes.

- ***Desktop Support*—Customer satisfaction levels in the areas of staff timeliness, cost-effectiveness, professionalism, and technical knowledge continue to rise after three years of data collection. Customer satisfaction trends in desktop services varied but through self-identification to refocus attention on attrition and hiring exceptional staff, the desktop arena was stabilized.**

- ***Research Library*—A quarterly web-based survey pulses the customer base to determine customer needs and satisfaction with Library products and services. An extensive, methodical process for understanding customer and market requirements is surpassed by no other group in CIC. The Library establishes its priorities and tracks performance against continual customer feedback. Resultant actions are always based on improving operational performance and providing a service needed by the customer. Data collected since FY96 indicates a continual upward trend in customer satisfaction levels.**

- ***Communication Arts and Services*—Customer satisfaction levels have been outstanding for the last three years. However, lack of customer response to surveys drove change in the method used to collect and validate data. A decision to personally interview internal and external customers was implemented this FY. Two CIC groups partnered to pilot a series of interviews with key product users. This approach, while somewhat simplistic, proved successful since the customer base felt inundated with customer surveys. A larger group of customers will be contacted to drive group strategies and objectives for FY00 metrics.**

- ***Information Architecture Standards (IA)*—The IA Project sustained a high level of customer satisfaction for the third year in a row. This, in itself, is noteworthy since the Project Manager was devoted to the Y2K initiative. Data indicates continued adherence to IA software standards, sustained satisfaction with the Project, and timely adoption of standards. Hats off to the Project Manager and those who supported the effort during her absence!**

FUNCTIONAL AREA: INFORMATION MANAGEMENT

Baldrige Assessment **This year CIC completed its third self-assessment against the Baldrige Award criteria. The evaluation was completed by two teams: a team of leaders and a team of customers and employees. The membership of the leadership team remained the same. The team composition of the customers and employees team came from within/without the Laboratory with some members returning, some first timers. The evaluation process was streamlined (less time in training, evaluation time reduced, and work was completed outside of the workshop) this FY. With this, less interaction and discussion took place amidst the evaluators—somewhat a different approach from past years. The National Council for Performance Excellence scored the assessment and provided an Improvement Planning Feedback Report. The scores tallied 320, a rise from previous years. The assessment cost was reduced by almost half and supports the operational performance objective. Even with the focus on Y2K and Cyber Security mandates this FY, the customer satisfaction levels continue to climb.**

1.3 ***EFFECTIVE IM MANAGEMENT SYSTEMS, OPERATIONAL PRACTICES AND INTERNAL CONTROLS:*** *Provide for effective self-assessments and corrective actions among the IM Focus Areas of IM management systems, operational practices and internal controls to ensure that information management functions provide effective support of programmatic and institutional goals.*
(Weight 20% Earned = 18%)

1.3.a ***IM Self-Assessment and Corrective Action Program:*** *Evaluation of the effectiveness of the IM Focus Areas' self-assessment programs' ability to identify, review and correct (if deficiencies are identified) programmatic and institutional management systems, operational practices and internal controls.* **(Weight 20% Earned = 18%)**

DOE Rating: Outstanding - 90%

Assumptions:

- *Measurement deliverable – self-assessment of the Information Management Focus Areas and any compliance issues appropriate to the Laboratory. The Laboratory and its DOE Operations Office will agree on IM Focus Areas. "Compliance" refers to requirements of law, regulations and applicable DOE directives.*
- *IM compliance issues will be evaluated on a Pass/Fail basis. The Laboratory and its DOE Operations Office will agree on the relative weighting of the IM focus areas and any existing compliance issues to be addressed in the Self-Assessment.*
- ***** *The IM Focus Area agreements between each Laboratory and its Operations Office will include weights and specific criteria for Good, Excellent and Outstanding gradients for each agreed-upon IM Focus Area. These agreements will be concluded prior to October 1, 1998.*

Gradients for Focus Areas:

Good:

- Management techniques are employed to assess the effectiveness of IM Focus Areas' performance in support of programmatic and institutional information management needs including internal process controls.
- Objective supporting material is available evidencing progress in identifying and correcting performance and compliance issues. Previous deficiencies have been corrected or have corrective action plans in place.

Excellent:

- There is a sound systematic approach responsive to the overall purpose of managing assessment processes and implementing corrective actions. Substantive progress has been made in self-identifying and closing deficiencies.

FUNCTIONAL AREA: INFORMATION MANAGEMENT

Outstanding:

- The Laboratory has institutionalized an evaluation process which effectively identifies performance and compliance issues and corrects weaknesses. This results in outstanding support of programmatic and institutional organizations with all compliance and agreement areas being addressed.

A rating of Outstanding was achieved with a score of 90% assigned for having an evaluation process that effectively identifies performance and compliance issues and corrects weakness. Response to deficiencies (identified by DOE or the Laboratory) was tenaciously pursued and corrected. However, both DOE and CIC agree there were areas that should have warranted closer attention that could potentially render the Laboratory vulnerable. While three areas were identified for self-assessment this FY, there is no evidence that continual assessment, as depicted by the Integrated Management Process (IMP), occurred outside of the focus areas. Further, an annual yearend evaluation of CIC Division performance against Business Plans objectives was not accomplished. Performance improvement could be realized when the IMP, or some form of it, is revitalized and focuses on continual self-assessment.

Y2K The overall rating for the Y2K focus area is Excellent with a score of 89%. The Laboratory established a Y2K Project that effectively identified performance and compliance issues at the end of FY98. The Department established new reporting requirements for safety-related systems during FY99 that the Project Team attempted to address; however, Senior Management was forced by DOE Headquarters to become involved and ensure Laboratory-wide attention was obtained to address these systems. The Project Team achieved good results and corrected all identified weaknesses. As a focus area, the following performance measure was negotiated: Ensure DOE mission-essential, safety, laboratory critical, and laboratory important systems at LANL are Y2K ready in accordance with the DOE/CIO requirements—with the expectation that: All mission-essential, safety, laboratory critical, and important systems are Y2K ready by October 1, 1999.

LANL met the following criteria during FY99:

Category	Criteria	Score
DOE mission-essential systems	All DOE/CIO mission-essential milestones are met by July 31, 1999 or a DOE/AL approved exception is in place.	Excellent. All DOE/CIO milestones were met, except for one. One system was implemented June 30, 1999.
DOE safety-related systems	75% of the safety-related systems meet the DOE/AL negotiated milestones (June 30, 1999) but contingency plans are in place for those systems that do not meet the milestones.	Good. Although the original scope was underestimated for the safety-system review, the Laboratory worked very diligently to meet the milestones. Four of the 18 safety-related systems that required implementation were not implemented until August 1999. However, all the milestones were accomplished in less than 2 and ½months.
Laboratory critical	100% of the Laboratory critical systems	Outstanding. All Laboratory

FUNCTIONAL AREA: INFORMATION MANAGEMENT

Category	Criteria	Score
systems	meet the LANL Year 2000 project plan dates.	critical systems Y2K ready.
Laboratory important systems	95% of the Laboratory important systems meet the LANL Year 2000 project plan dates.	Outstanding. All Laboratory important systems Y2K ready.

Printing and Publishing **The overall rating for the Printing and Publishing focus area is Outstanding with a score of 90%. During the FY98 BMOR, two printing and publishing issues surfaced which warranted Laboratory attention. First, the need to track and report all *printing, duplicating, and copying* activity; and second, jobs under the 5,000 production units of any one page and any job exceeding 25,000 production units in aggregate of multiple pages were being reported to the Printing Officer. The Printing Officer quickly responded to the citation by gathering respective personnel in the CIC Division as well as the BUS Division to modify the procurement process. A Laboratory-wide master memorandum was issued describing the types of equipment and services needing advanced approval of the Printing Officer. An e-mail sent to all cardholders prohibited the acquisition of printing and duplication services from external sources through all procurement channels, including the Purchase Card. Therefore, as validated during the on-site visit, BUS Division no longer processes procurements without approval of the Printing Officer.**

In response to the second issue, the Printing Officer established an equipment request form which queries requestors on the intended use of the copier and/or printer purchase. Enforcement of the 5,000/25,000 production unit rule is managed by requiring the requestor to agree to maintaining a level of activity under this requirement. Further, this form provides the Printing Officer a mechanism for ensuring a sound copying equipment management program, whereby, equipment is fully used to its capability or moved to suit other Laboratory needs.

Lastly, information for obtaining printing, duplicating, and/or copying information or services was added to the Laboratory's on-line publications manual, *Publishing at Los Alamos*.

Records Management **Overall, LANL continues to make strides towards its goals as set forth in the five-year plan. At the end of FY99, LANL accomplished 61% of its records inventory which equates to the Far Exceeds expectations category. Therefore, LANL's progress in records management is rated Outstanding with a numerical score of 90%.**

LANL continues to work towards the Department's previously established mandate (October 1, 1995) to complete the Records Inventory and Scheduling Initiative and continues to make progress in completing this task. According to the five-year plan, LANL exceeds expectations in the inventory process. Since LANL is over 60% done with the inventory, it is important that they simultaneously schedule records for disposition using the National Archives and Records Administration (NARA) General Records Schedules (GRS) and the Department of Energy Records Schedules (DOERS).

The 36 CFR, Part 1228.50(d) requires review and submittal of Records Inventory and Disposition Schedules (RIDS) on an annual basis (due to AL by October 1 every year). To date, LANL has not submitted the RIDS for FY99 for review by DOE/AL. It is also observed that this was not accomplished in FY98 although the inventory was started in

FUNCTIONAL AREA: INFORMATION MANAGEMENT

FY98. LANL needs to provide Records Inventory and Disposition Schedules on a yearly basis as required by the CFR.

The LANL Records Management staff continued to work closely with internal customers to answer questions and provide support in basic records management and provide assistance in special tasks.

1.4 ***STRATEGIC AND TACTICAL PLANNING***: *IM plans and practices are aligned with Laboratory strategic and tactical requirements.* **(Weight = 20% Earned = 17%)**

1.4.a ***Planning Initiatives:*** *Evaluation of evidence that Information Management is aligned with the Laboratory's missions.* **(Weight = 20% Earned = 17%)**

DOE Rating: Excellent - 85%

Assumptions:

- *Measurement deliverable – IM plans or descriptions of IM initiatives that support the mission and plans of the Laboratory. Reference may be made to accessible work products or other existing Laboratory documentation.*

Gradients:

Good:

- Planning, evidenced by documentation, that effectively supports the Laboratory's missions.

Excellent:

- A planning process exists which drives IM practices to align with the Laboratory's missions.

Outstanding:

- Evidence that the IM planning process can adapt to changing conditions, employs sophisticated methods or planning tools, and has received external recognition of excellence.

A rating of Excellent was achieved with a score of 85% since a planning process exists that drives IM practices to align with the Laboratory's missions. The Laboratory's strategic and tactical planning in past years was flagged as "best-in-class." The success was due to the extraordinary attention given this area to ensure plans and practices were aligned to the mission, guided by the IMP, and supported in the group Business Plans. This year brought about significant challenges that diffused the attention from planning and focused on such issues as Y2K and Cyber Security. The CIC Division Strategic Plan dated July 1998 (used to guide CIC for FY99), was a good "start" at most but unfinished. The vision, values, and key success factors were "being developed" and were not finalized. Strategic goals were identified in high performance computing, information management, communications products, workforce, and customer relationships with affiliated tactical goals. Group Business Plans were created in the first quarter of the FY but not revisited to include new initiatives or updates. Self-assessment, an integral element of the IMP, was not concluded to measure FY99 performance against the tactical goals. More importantly, the IMP was not followed this FY. Credit is given since the IMP process remains instilled in the work ethics of CIC and while fragmented, closely supported the following FY99 strategic accomplishments:

- **The senior CIC managers held a strategic planning session in January 1999 which focused on establishing a mission statement and analyzing strengths and weaknesses found in the strategic, computing, research, and information services areas.**

FUNCTIONAL AREA: INFORMATION MANAGEMENT

- **All CIC managers participated in a retreat where critical problems, plans, and actions were listed. Champions were identified to execute the following actions in FY00:**

  1. **Revitalize strategic and tactical planning.**
  2. **Reexamine the research leadership role.**
  3. **Meet operational objectives in times of resource constraints.**
  4. **Develop strategies on long- and short-term Information Security.**
  5. **Examine the CIC decision-making process.**
  6. **Examine synergies across strategic computing, information services, and research areas.**
  7. **Study and establish the concept of information stewardship.**

- **IM Focus Team was realigned and given a new mission.**

- **The Chief Information Officers Council was established Laboratory-wide.**

- **Areas for improvement in the Information Services area were self-identified for FY00.**

Item 1 above will be closely tracked in FY00 to ensure that: 1) CIC aligns its FY00 strategic, tactical, and business plan objectives to the Laboratory Strategic Plan; 2) resultant accomplishments are due to sound planning with few being left to happenstance, 3) where possible, objectives are mapped to and support the DOE Secretary's Performance Agreement with the President, and 4) a clear link exists from CIC group Business Plans to the CIC Strategic Plan.

FUNCTIONAL AREA: PROCUREMENT

FUNCTIONAL AREA:	**PERFORMANCE ASSESSMENT:**
PROCUREMENT	**Outstanding - 90%*** **Points Earned – 29.7**

* The calculated score for Procurement Management is 92%, but the overall score for Procurement Management is reduced by 2% for deficiencies in the Make-or-Buy Plan (the total point score is reduced also from 30.48 to 29.7)

Performance Objective #1	**Outstanding - 93%**

MANAGEMENT OF INTERNAL BUSINESS PROCESSES: The Laboratory shall have systems in place to ensure Procurement programs operate in accordance with policies and procedures approved by DOE and which ensure that business is conducted at an optimum operational efficiency level. **(Weight = 70% Earned =65%)**

1.1 ***SYSTEM EVALUATION:*** *The Laboratory conducts, documents, and reports annually, the results of a successful assessment of its purchasing system against established evaluation criteria.*
(Weight = 30% Earned = 27%)

1.1.a ***Assessing System Operations:*** *The Laboratory shall develop and submit a risk-based system evaluation plan to DOE and UC no later than October 1, 1998, for review and concurrence. The procurement system shall be assessed against system evaluation criteria as identified in the plan. In addition, an aggressive, cost effective management plan for resolution of system deficiencies and opportunities for process improvement shall be developed. Management of the results of the system assessment shall be evaluated. System deficiencies will include those identified by the Laboratory, internal Laboratory organizations, and external organizations.*
(Weight = 30% Earned = 27%)

DOE Rating: Outstanding - 90%

Basis for Rating:

Good:

- There is a sound, systematic approach, responsive to the primary purpose of the system evaluation. Cost benefit analyses and risk assessments are good when addressing deficiencies and/or opportunities for improvement. Implementation of remedial actions is appropriate and demonstrates responsible leadership in many to most cases.

Excellent:

- The requirements for a Good rating are met. There is a sound, systematic approach, responsive to the overall purpose of the system evaluation. In addition, cost benefit analyses and risk assessments are rated good to excellent when addressing deficiencies and/or opportunities for improvement. Implementation of remedial actions is sound and demonstrates responsible leadership in most cases.

Outstanding:

- The requirements for an Excellent rating are met. There is a sound, systematic approach, fully responsive to all the requirements of the system evaluation. In addition, cost benefit analyses and risk assessments are rated excellent when addressing deficiencies and/or opportunities for improvement. Implementation of remedial actions is sound and demonstrates strong leadership in most cases.

FUNCTIONAL AREA: PROCUREMENT

The Laboratory has a sound, systematic approach that is fully responsive to the requirements of the system evaluation. Areas subjected to system evaluation in FY99 were Management System Overview, Pre-solicitation, Competition, Evaluation and Source Selection, Cost/Price Analysis, Letter Subcontracts, and Post-Award Administration.

Streamlining in the way in which assessments were conducted were introduced in FY99, thus saving time required to conduct reviews. Approximately 540 files including Contract Review Board reviews, purchase card audits, construction, and A-E subcontracts were scrutinized by Procurement management and team leaders throughout the fiscal year. The Laboratory provided a special and highly appropriate system evaluation of Environmental Science and Waste Technology acquisitions. Several findings and observations were subjected to corrective action and, once corrected, should improve support to this important area.

Root cause and cost-benefit analyses were applied where applicable although more specificity as to costs involved could have been documented. Risk assessments were employed in order to determine the most appropriate course of action and corrective actions were considered adequate to address problems identified. Procurement Manager and Team Leader involvement is evident. The Procurement Manager conducts a quarterly review of the results of the Team Leaders' review of subordinate actions. The Procurement Manager is planning to pursue increased staffing, but training may also need to be expanded along with inclusion of subcontract administration responsibility in the individual employee's performance expectations. Quarterly audits of purchase card transactions indicate some individual user problems but no systemic difficulties. System improvements introduced in FY99 allow for monthly-automated reports with expanded description fields to assist in the identification of unauthorized purchases.

Although reviews documented the inclusion of system standard objective requirements, they provided little or no verification of the subjective adequacy of file documentation in support of system standards. It was noted that an increase in the number of cases where government property is not properly accounted for prior to subcontract closeout is addressed in Procurement employees' performance expectations. Subcontract administration remains a significant issue and improvement as a result of corrective actions implemented in FY98 has not been significant. Validation of FY98 corrective actions indicates that improvements were made in Construction subcontracts but that more attention is required in Architect-Engineering subcontracts as well as the administrative controls and formality of LANL's Basic Ordering Agreement type contracts to ensure that the individual orders or tasks are accomplished within scope and do not exceed the basic contract limitations or estimates.

There is some concern relative to the validity of sampling techniques used by LANL in its one time annual review. The sample of 90 files was not stratified by different kinds of procurements nor was there assurance that there was a representative number of different kinds of procurements in each category. The division of procurement actions into categories of greater than $25,000 and less than $25,000 promoted review of very small purchases such as telephone orders but, since half the sampled files were less than $25,000, the number of procurements presenting greater risk was reduced. This reduction, along with the uncertainty that a representative number of different kinds of procurements were indeed sampled, suggests that the sampling for FY00 for this type of review should ensure that system evaluations demonstrate a broader cross-section of procurements to provide better systematic assurance that findings are valid.

FUNCTIONAL AREA: PROCUREMENT

1.2 ***PURSUING BEST PRACTICES:*** *The Laboratory successfully uses benchmarking data and industry standards to identify targets of opportunity for improving operational efficiency and pursues opportunities aggressively.* **(Weight = 20% Earned = 19%)**

1.2.a ***Measuring Efficiency:*** *The Laboratory will be measured against benchmarks and industry standards for cycle time and utilization of alternative procurement approaches/techniques (e.g. rapid purchasing, JIT, and purchase card). The Procurement organization will use FY98 results to establish baselines, goals and gradients no later than December 1, 1998.*
(Weight = 20% Earned = 19%)

DOE Rating: Outstanding - 95%

Assumptions:

- *Users are defined as those individuals making procurements who are external to the procurement core organization.*

Basis for Rating:

In partnership with DOE and UC, the Laboratory shall identify benchmarks and industry standards in each procurement area identified as a core requirement in the DOE Balanced Scorecard and establish and justify goals in pursuit of those standards. The Laboratory may propose gradients based on data other than benchmarks and industry standards if the Laboratory provides adequate support of other optimum operating levels.

LANL performed exceptionally well in the area of average cycle time, achieving a procurement acquisition lead-time of 10.0 days. This compares to the 10 days recorded in FY98 and is consistent with the 1999 Center for Advanced Purchasing Studies (CAPS) DOE Contractor benchmark of 10.5 days. This performance was accomplished during a fiscal year in which subcontracted procurement dollars awarded were at an all-time high of approximately $730M. Based on the procurement employee surveys, there was evidence that procurement staff was strained by workload requirements, however. Approximately 96% of all transactions were placed via streamlined, rapid purchasing techniques (JIT, local vendor agreements, and telephone release small purchases) put into place by BUS-5, which is the same approximate percentage experienced for FY98, and was identified in a recent DOE Balanced Scorecard Report as "best-in-class" for this area.

1.3 ***SUPPLIER PERFORMANCE:*** *The Laboratory shall manage its suppliers in such a manner as to ensure that the goods and services provided meet the Laboratory's requirements.*
(Weight = 15% Earned = 14.25%)

1.3.a ***Measuring Supplier Performance:*** *The Laboratory shall measure the performance of its key suppliers. Supplier performance will be measured from a baseline with goals and gradients agreed to by the DOE, UC, and the Laboratory no later than November 30, 1998.*
(Weight = 15% Earned = 14.25%)

DOE Rating: Outstanding - 95%

Basis for Rating:

FUNCTIONAL AREA: PROCUREMENT

Good:
- The Laboratory has identified its key suppliers and measures their performance against the baseline established for each of those suppliers. Supplier performance improvement goals for a Good rating, as selected by the Laboratory in partnership with DOE and UC, have been achieved.

Excellent:
- The requirements for a Good rating are achieved and, in addition, supplier performance improvement goals for an Excellent rating, as selected by the Laboratory in partnership with DOE and UC, have been achieved.

Outstanding:
- The requirements for an Excellent rating are achieved and, in addition, supplier performance improvement goals for an Outstanding rating, as selected by the Laboratory in partnership with DOE and UC, have been achieved.

LANL identified its Just-In-Time (JIT) vendors as key suppliers and established on-time delivery goals for them. LANL achieved a cumulative on-time rate of 94.5% throughout the year. This performance approximated the FY98 baseline of 94.8% and the 94.8% benchmark established under the Center for Advanced Purchasing Studies (CAPS) DOE Contractor benchmark study conducted in 1999. This performance is reflective of a well-managed JIT program with value-added follow-up of supplier performance as needed to meet internal customer expectations.

1.4 ***SOCIOECONOMIC SUBCONTRACTING:*** *The Laboratory shall support and promote socioeconomic subcontracting programs.* **(Weight = 5% Earned = 4.75%)**

1.4.a ***Meeting Socioeconomic Commitments:*** *The percentage of actual subcontract dollar obligations (not subcontract face value) in the following 4 categories will be compared against goals negotiated for FY99.*

(a) Small Business
(b) Small Business Set-Asides
(c) Small Disadvantaged Business
(d) Women-Owned Small Business

The Laboratory will propose and provide supporting rationale and statistical support for socioeconomic goals. **(Weight = 5% Earned = 4.75%)**

DOE Rating: Outstanding - 95%

Assumptions:
- *It is recognized that pursuit of cost effectiveness and best business practices may have an impact on the establishment of socioeconomic goals and/or on the final achievement of such goals. Consideration will be given to this impact during forecasting and mid-year updates of goals and during evaluation of self-assessments.*
- *Obligations qualifying in more than 1 category may be counted in more than 1 category, e.g., Small Business and Small Business Set-Asides. Lower tier subcontracts cannot be counted toward the primary goal, but may be goaled and reported separately.*
- *The purchasing base for purposes of this measure is all obligations incurred during the fiscal year period, excluding: (1) Subcontracts with foreign corporations which will be performed entirely outside of the United States; (2) Utilities (gas, sewer, water, steam, electricity and regulated telecommunications services); (3) Federal Supply Schedule Orders when all terms of the GSA*

FUNCTIONAL AREA: PROCUREMENT

contract apply; (4) GSA Orders when all terms of the GSA contract apply; (5) Agreements with DOE management and operating contractors and University campuses; (6) Federal government and DOE mandatory sources of supply; Federal prison industries, industries of the blind and handicapped; and (7) Procurement card purchases.

Note: The schedule for submitting and negotiating goals will be followed per Appendix D.

Basis for Rating:

Good:

- Meeting all goals with consideration given to changes in funding profiles, changes in forecast, deletion of requirements, etc., should goals not be met.

Excellent:

- Exceeds three of the four goals and meets the fourth goal. Consideration will be given to regional/local outreach programs, Good Neighbor Program, awards/recognition, pilot program participation, and/or other support for DOE socioeconomic programs when the Laboratory is borderline to meeting a goal that leads to a rating of Excellent.

Outstanding:

- Exceeds all goals. Consideration will be given to regional/local outreach programs, Good Neighbor Program, awards/ recognition, pilot program participation, and/or other support for DOE socioeconomic programs when the Laboratory is borderline to meeting a goal that leads to a rating of Outstanding.

FY 1999 Socioeconomic Goals / Results

Category	FY 1999 Goal	FY 1999 Result
Small Business	40%	42.6%
Sm. Business Set Asides	10%	11.2%
Sm. Disadvantaged Business	9%	13.3%
Woman-owned Sm. Business	8%	11.1%

LANL exceeded the four socioeconomic program goals for FY99. It is noted that the FY99 performance was less than FY98 results while total subcontract dollars for FY99 were at an all time high of ~$730M. Dollars awarded to Northern New Mexico (NNM) businesses ($351.7M) were approximately 80% greater than those awarded prior to the implementation of the Regional Purchasing Program. Nevertheless, there is a legacy perception in a broad cross-section of the NNM community that indicates that LANL must do more than relying on subcontract dollars awarded alone. Sensitivity to the way LANL interacts and conducts business with NNM area firms must be constantly assessed to ensure that outreach efforts continue to do good, and are perceived that way by the NNM area stakeholders.

Performance Objective #2	**Outstanding - 90%**

CUSTOMER SATISFACTION: The Laboratory shall periodically assess the degree of satisfaction with Procurement's ability to meet customer needs in terms of timeliness, quality, and communications.
(Weight = 10% Earned = 9%)

2.1 ***CUSTOMER FEEDBACK:*** *As a continuous indicator of overall customer satisfaction, the Procurement Organization shall survey in the last half of the rating period the needs and satisfaction of its external*

FUNCTIONAL AREA: PROCUREMENT

customers relative to its purchasing systems and methods. The following customer groups will be surveyed and weighted as indicated:

- *Laboratory customers (70%)*
- *DOE (20%)*
- *Suppliers (10%)*

(Weight = 10% Earned = 9%)

2.1.a ***Customer Satisfaction Index:*** *A customer satisfaction index for the Procurement Organization shall be created from the results of the individual surveys of customer groups using the weighting as indicated in the criteria using a 100-point scale. The satisfaction index is to be tracked and trended with an upward trend expected. The DOE/UC/Laboratory will mutually agree on the acceptability of the surveying process and contents no later than November 1, 1998. Survey results will be finalized no later than September 1, 1999.* **(Weight = 10% Earned = 9%)**

DOE Rating: Outstanding - 90%

Assumptions:

- *Included in the evaluation will be a summary describing the activities that support the index score achieved. Consideration will be given to activities/efforts taken to improve customer satisfaction.*

Basis for Rating:

Good:

- The Procurement Organization achieves a customer satisfaction score of 60.

Excellent:

- The Procurement Organization achieves a customer satisfaction score of 70.

Outstanding:

- The Procurement Organization achieves a customer satisfaction score of 80.

LANL surveyed both internal and external customers relative to their satisfaction with procurement support provided. Customers included requesters, suppliers, and DOE representatives. Overall, Procurement achieved a composite satisfaction score of 81.5. However, the response rate to the surveys was not high. Nevertheless, it appears that sufficient responses were received to indicate customers generally feel procurement support is above average. Requester satisfaction increased slightly from 78 in FY97 to 79 in FY99. Similarly, satisfaction scores of suppliers increased from 84 in FY97 to 86 in FY99. However, LANL's method of only surveying successful proposers could be improved by including unsuccessful proposers in the survey data. DOE scores grew from 85 in FY97 to 88 in FY99. These scores show a continuing level of confidence in Procurement's ability to respond to each customer's individual needs. DOE expressed particular satisfaction with LANL's response to requests, while suppliers awarded high marks for the ethical manner in which Procurement conducts negotiations.

Performance Objective #3	**Excellent - 89%**

LEARNING AND GROWTH: The Laboratory shall ensure that information and feedback mechanisms are available to procurement employees to enhance continued successful procurement operations.
(Weight = 10% Earned = 8.85%)

FUNCTIONAL AREA: PROCUREMENT

3.1 ***EMPLOYEE FEEDBACK:*** *The Laboratory shall foster improvement of processes and performance by assessing and pursuing improvements in employee satisfaction.* **(Weight = 5% Earned = 4.1%)**

3.1.a ***Employee Satisfaction Index:*** *A Procurement employee satisfaction index shall be created from the results of an employee survey using a 100-point scale. The satisfaction index is to be tracked and trended with an upward trend expected. The DOE/UC/Laboratory will mutually agree on the acceptability of the surveying process and contents no later than November 1, 1998. Survey results will be finalized no later than September 1, 1999.* **(Weight = 5% Earned = 4.1%)**

DOE Rating: Excellent - 82%

Assumptions:

- *Included in the evaluation will be a summary describing the activities that support the index score achieved. Consideration will be given to activities/efforts taken to improve employee satisfaction.*

Basis for Rating:

Good:

- The Procurement Organization achieves an employee satisfaction score of 60.

Excellent:

- The Procurement Organization achieves an employee satisfaction score of 70.

Outstanding:

- The Procurement Organization achieves an employee satisfaction score of 80.

LANL Procurement employees were somewhat less satisfied in FY99 than in FY97 when the last survey was performed. In FY99, the LANL Procurement employee survey scored 73.7% for the organization versus a rating of 79.0% in FY97. Procurement employees tied major reductions in satisfaction to the comment "I have enough time to do the work assigned to me." Less pointed but still notable were score reductions in the satisfaction surrounding how management responds to employee requests, having adequate training to accomplish assignments, and assistance in solving problems. Results indicate a level of stress exists among Procurement employees, which may be associated with the level and number of staff to meet LANL management's expectations for the amount of work and quality of work accomplished. Procurement management hired additional staff, and intends to hire more staff. However, additional staff may be only part of the answer to improving employee satisfaction, and LANL should take a holistic approach to improvements that would include training, working environment, organizational structure, and one-on-one discussion of workload difficulties.

3.2 ***INFORMATION AVAILABILITY:*** *The Laboratory shall make readily available to its employees current information important to the successful performance of their procurement related functions.* **(Weight = 5% Earned = 4.75%)**

3.2.a ***Measuring Availability of Information:*** *The Laboratory will identify procurement related employee information needs and compare these with information currently available to the employee for the purpose of identifying information shortfalls. The Laboratory will submit a plan outlining the approach to be employed in baselining the total number of information items available versus the total number of information items needed. Approach and deployment of the plan in establishing a baseline will be evaluated for FY99 and will include the process by which the Laboratory will determine information items needed and available. The final milestone of*

FUNCTIONAL AREA: PROCUREMENT

the plan will be to develop gradients relative to the level of information availability desired by the end of FY00. The level of information availability will be measured beginning in FY00.
(Weight = 5% Earned = 4.75%)

DOE Rating: Outstanding - 95%

Assumptions:

- *Information is considered available if it is current or requires only minor revision and the information is in compliance with Prime Contract requirements.*
- *The following formula shall be applied to measure the level of information availability:*

$$\text{Level of Information Availability} = \frac{\text{Number of Information Items Available}}{\text{Number of Information Items Needed}}$$

$$\text{Gap (\%)} = 100\% - \text{Level of Information Availability (\%)}$$

Basis for Rating:

Good:

- The procurement related information needs of employees and a comparison to procurement related information currently available to employees have been identified and baselined. Gradients for reducing the gap in FY00 have been developed.

Excellent:

- The requirements for a Good rating are met. In addition, the documentation provides clear evidence that the gap reduction effort will be fully deployed during the First Quarter of FY00.

Outstanding:

- The requirements for an Excellent rating are met. In addition, the documentation provides clear evidence that the gap reduction effort will be fully deployed on October 1, 1999.

LANL conducted a planned, well executed, and extensive review of information items needed by Procurement employees and compared these with those information items currently available. While all Procurement employees were given the opportunity of participating, effective use was made of the Employee Communication Focus Team established in recent years for the purpose of improving the quantity and quality of employee feedback. As a result of this effort, BUS-5 determined that, out of 348 items identified as "needed", 329 were available for use. Included in the review was a determination of the availability and currency of forms, policies, procedures, and reports. LANL indicated that action has already been taken to address the 19 information items that comprise the gap in available information identified. This result equates to an Outstanding availability rate of 94.5%, especially considering that the "national target" goal established by DOE/HQ is 90%. With the list and baseline now established, LANL is encouraged to develop a program for periodically checking to ensure currency and availability is maintained and to add new items when identified by Procurement employees, or through benchmarking with other M&O contractor sites followed by employee validation on the usefulness of the information.

Performance Objective #4	**Outstanding - 95%**

MANAGING FINANCIAL ASPECTS: The Laboratory shall ensure optimum cost efficiency of purchasing operations. **(Weight = 10% Earned = 9.5%)**

FUNCTIONAL AREA: PROCUREMENT

4.1 ***PROCESS COST:*** *Operating costs as a percentage of total procurement dollars obligated will be tracked and trended.* **(Weight = 10% Earned = 9.5%)**

4.1.a ***Cost to Spend Ratio:*** *The Laboratory's operating costs (labor plus overhead) will be divided by purchasing obligations. The Procurement organization will use FY99 projections and FY98 actuals to establish goals and gradients no later than December 1, 1998.*
(Weight = 10% Earned = 9.5%)

DOE Rating: Outstanding - 95%

Assumptions:

- *The following formula shall be applied to measure the cost to spend ratio:*

$$\text{Cost to Spend Ratio} = \frac{\text{Purchasing Organization Cost}}{\text{Total Purchasing Obligations}}$$

Basis for Rating:
In partnership with DOE and UC, the Laboratory shall establish and justify gradients for the FY99 Cost to Spend Ratio measurement.

The cost to spend ratio increased slightly from 1.38% in FY98 to 1.43% in FY99. Nevertheless, this performance is significantly better than the 1999 Center for Advanced Purchasing Studies (CAPS) DOE Contractor benchmark of 2.9%. LANL awarded approximately $730M in subcontract obligations in FY99, an all-time record at LANL.

FUNCTIONAL AREA:	**PERFORMANCE ASSESSMENT:**
PROPERTY MANAGEMENT	**Outstanding - 92%** **Points Earned - 480**

PROPERTY: Property Management will employ the Property Performance Assessment Model (PPAM) for FY99. Each Property Management organization will finalize its final assessment plan with DOE and UC by September 30, 1998. This plan will cover performance thresholds, performance ranges (gradients), specific scoring criteria, frequency of reporting, and frequency of scoring.

In this Model, points are used to determine the score for each activity. Weights and the corresponding points are shown below at the Objective, Criteria, and Measure levels. At the Basis for Rating level, total possible points for each activity are shown below. Overall ratings will be based on the following (where a total weight of 100% is equal to 500 points):

>= 475 Outstanding
>= 450 Excellent
>= 400 Good
>= 352 Marginal
< 352 Unsatisfactory

The Adjectival Rating and Contractual Score will be assigned using the Property Management Scoring Table (see Exhibit I).

Performance Objective #1	**Outstanding - 98%** **Points Earned - 222**

ACCOUNTABILITY FOR EQUIPMENT, SENSITIVE PROPERTY, AND PRECIOUS METALS: The Laboratory shall ensure accountability for equipment and sensitive personal property and precious metals. **(Weight = 45%/Total Points = 225 Earned = 222)**

1.1 ***ACCOUNTABILITY FOR EQUIPMENT, SENSITIVE PROPERTY, AND PRECIOUS METALS:*** *The Laboratory shall conduct successful personal property and precious metal inventories as established in its inventory planning.* **(Weight = 30%/Total Points = 150 Earned = 149)**

1.1.a ***Property and Precious Metals Accounted For:*** *The percentage of personal property and precious metals accounted for, as described in the approved inventory plans, will be measured.* **(Weight = 30%/Total Points = 150 Earned = 149)**

DOE Rating: Outstanding - 149 Points

1.1.a.1 Sensitive Inventory. LANL accounted for 99.87% of the Sensitive Items inventoried in accordance with the FY99 Inventory Plan. LANL randomly sampled 838 line items with an acquisition value of $3,293,960. LANL has a total of 50,211 Sensitive items with an acquisition value of $191,559,706. DOE participated in the validation of inventory results.

Based on DOE validation of LANL's self-assessment report, interviews, and supporting documentation, this area is rated Outstanding. LANL earned 65 of the available 65 points.

FUNCTIONAL AREA: PROPERTY MANAGEMENT

1.1.a.2 Equipment Inventory. LANL accounted for 100% of the Equipment items inventoried. LANL randomly sampled 723 line items with an acquisition value of $18,815,619. LANL has a total of 17,815 Equipment items with an acquisition value of $720,958,000. DOE participated in the validation of inventory results.

Based on DOE validation of LANL's self-assessment report, interviews, and supporting documentation, this area is rated Outstanding. LANL earned 60 of the available 60 points.

1.1.a.3 Precious Metals Inventory. LANL conducted a 100% inventory of the Laboratory's precious metal holdings. LANL accounted for 99.9% of the total (1,204,273.00 grams) valued at $3,132,257. The unlocated grams were valued at $2,513.88. During FY99, LANL doubled its precious metal holdings as a result of transfers from Rocky Flats in support of the Non Nuclear Reconfiguration Program.

Based on DOE validation of LANL's self-assessment report, interviews, and supporting documentation, this area is rated Outstanding. LANL earned 25 of the available 25 points.

Overall, for performance objective 1.1, based on DOE's validation of LANL's self-assessment report, interviews, and supporting documentation, this area is rated Outstanding. Due to the quality of the self-assessment report, the score was reduced by one (1) point (from 150 to 149) because LANL's self assessment report did not provide overall total line items nor dollar value of the inventories as required.

1.2 ***IDENTIFICATION OF ITEMS SUBJECT TO INVENTORY:*** *The Laboratory will ensure personal property items which are subject to inventory are accurately identified.*
(Weight = 15%/Total Points = 75 Earned = 73)

1.2.a ***Accuracy of Identification:*** *The percentage of items accurately identified in the property database will be measured.* **(Weight = 15%/Total Points = 75 Earned = 73)**

DOE Rating: Outstanding - 73 Points

1.2.a.1 Percent of property items identified and tagged by Just-In-Time Vendors.

LANL conducted a random sample of 350 items out of the total 4,497 items acquired through Just-In-Time (JIT) vendors during this rating period. One hundred percent of the JIT items sampled were accurately identified and tagged by JIT vendors. As a result of feedback received from customers, LANL's Property and Procurement CQI Team agreed to replace small bar code labels with larger ones to make them more easily read and JIT vendors were instructed to affix the new labels in a more accessible location. The partnering effort resulted in the successful results of this measure and enhanced awareness,

understanding, and alignment between the two organizations. Staff from the JIT procurement team participated in LANL's Property Awareness Month activities to promote awareness of the rules and regulations associated with JIT purchases.

Based on DOE validation of LANL's self-assessment report, interviews, and supporting documentation, this area is rated Outstanding. LANL earned 10 of the available 10 points.

1.2.a.2 Percent of property acquired through Excess Acquisitions that have been properly identified, recorded, and tagged in the Property Accounting Inventory Reporting System (PAIRS) within 60 days of receipt at LANL.

During FY99, LANL acquired a total of 167,131 *property items through excess* and 501 grams of precious metals valued at $5,358,963. Of the total, 68 items required either a sensitive or equipment tag. 100% of the items were accurately identified, recorded in PAIRS and tagged within 60 day of receipt.

Based on DOE validation of LANL's self-assessment report, interviews, and supporting documentation, this area is rated Outstanding. LANL earned 10 of the available 10 points.

1.2.a.3 Percent of property identified in LANL's database during record-to-floor sampling.

LANL randomly sampled 240 of the 2,548 items purchased via purchase order to determine if LANL had adequate process controls to ensure accurate identification, recording, and tagging of equipment acquired via this method. Of the 240 sample items that were subject to inventory and that had been vouchered and received, 97.9% were accurately identified and recorded in PAIRS.

Based on DOE validation of LANL's self-assessment report, interviews, and supporting documentation, this area is rated Excellent. LANL earned 18 of the available 20 points.

1.2.a.4 Percent of property identified in database during floor-to-record sampling.

During LANL's scheduled walk-throughs in FY99, a total of 245 property numbered items was randomly selected from the field to test whether they were also recorded in the PAIRS database. Of the 245 items sampled, 100% were recorded in PAIRS.

Based on DOE validation of LANL's self-assessment report, interviews, and supporting documentation, this area is rated Outstanding. LANL earned 25 of the available 25 points.

1.2.a.5 Percent of property items in database with accurate descriptive information.

FUNCTIONAL AREA: PROPERTY MANAGEMENT

LANL randomly sampled a total of 125 items (1,225 data fields) to measure the accuracy of descriptive information in PAIRS. The critical data fields agreed upon by LANL and DOE were: 1) Bar Code Number, 2) Nomenclature, 3) Manufacturer, 4) Model Number and 5) Serial Number. Of the 1,225 data fields tested, 100% were accurately recorded in PAIRS. In the performance of this measure, LANL suggested that Model Number did not provide an accurate descriptive test. DOE will analyze LANL's basis for conclusion and reconsider the retention of this specific data field as a critical field.

Based on DOE validation of LANL's self-assessment report, interviews, and supporting documentation, this area is rated Outstanding. LANL earned 10 of the available 10 points.

Performance Objective #2	**Outstanding - 97%** **Points Earned – 97**

STEWARDSHIP OVER PERSONAL PROPERTY: The Laboratory shall ensure that both stewardship and custodianship for personal property is maintained. **(Weight = 20%/Total Points = 100 Earned = 97)**

2.1 ***ORGANIZATIONAL STEWARDSHIP AND INDIVIDUAL ACCOUNTABILITY:*** *The Laboratory will ensure organizational and individual accountability (stewardship and custodianship, respectively) for property.* **(Weight = 20%/Total Points = 100 Earned = 97)**

2.1.a ***Timeliness of Assignment:*** *The accountable individual is identified for equipment and sensitive property, and the timeliness of such identification is measured*
(Weight = 20%/Total Points = 100 Earned = 97)

DOE Rating: Outstanding - 97 Points

Note: Only individual responsibility applies.

2.1.a.1 Percent of property numbered items signed for by the custodian within 60 days of being recorded in PAIRS (initial assignment).

Of the 10,338 property numbered items received by LANL, 10,060 were signed for by the custodian, within 60 days of being recorded in PAIRS, earning LANL a rating of 97.3%. LANL attributes its success to the marketing and awareness of the accountability statement and the acceptance by the individual custodian as a matter of conduct of operations.

Based on DOE validation of LANL's self-assessment report, interviews, and supporting documentation, this area is rated Excellent. LANL earned 27 of the available 30 points.

2.1.a.2 Percent of property numbered items, recorded in PAIRS, signed for by the custodian (Beyond 60 days.)

FUNCTIONAL AREA: PROPERTY MANAGEMENT

Of the total 69,520 property numbered items recorded in PAIRS, 99.8% (69,389) were assigned to and acknowledged by an accountable individual throughout the life cycle of the property. During FY99, LANL's performance reflected continuous improved performance. The Laboratory continues its efforts to provide Laboratory-wide awareness, training, and partnering between LANL's Property Administrators, Property Specialists, and upper management.

Based on DOE validation of LANL's self-assessment report, interviews, and supporting documentation, this area is rated Outstanding. LANL earned 70 of the available 70 points.

Overall, for Performance Objective #2, based on DOE's validation of LANL's self-assessment report, interviews, and supporting documentation, LANL earned 97 of the available 100 points.

Performance Objective #3	**Outstanding - 96%** **Points Earned – 24**

VEHICLE UTILIZATION: The Laboratory shall have a program to manage its vehicle fleet. **(Weight = 5%/Total Points = 25 Earned = 24)**

3.1 ***FLEET MANAGEMENT:*** *The Laboratory shall manage its fleet to ensure appropriate vehicle utilization.* **(Weight = 5%/Total Points = 25 Earned = 24)**

3.1.a ***Vehicle Utilization:*** *The Laboratory shall measure the percentage of total eligible vehicles meeting local utilization criteria.* **(Weight = 5%/Total Points = 25 Earned = 24)**

DOE Rating: Outstanding - 24 Points

3.1.a.1 LANL achieved a *discretionary* vehicle utilization rate of 152% earning LANL a rating of 100%. LANL has a total GSA fleet of 1,458 vehicles. Of this total, 284 are discretionary vehicles. The remaining 475 are exempt from any mileage standards.

Based on DOE validation of LANL's self-assessment report, interviews, and supporting documentation, this area is rated Outstanding. LANL earned 10 of the available 10 points.

3.1.a.2 LANL achieved a utilization rate of 169% for *non-discretionary* vehicles during the rating period earning LANL a rating of 100%. LANL has a total of 699 non-discretionary vehicles.

Based on DOE validation of LANL's self-assessment report, interviews, and supporting documentation, this area is rated Outstanding. LANL earned 15 of the available 15 points.

FUNCTIONAL AREA: PROPERTY MANAGEMENT

Overall, for Performance Objective #3, based on DOE's validation of LANL's self-assessment report, interviews, and supporting documentation, LANL earned 25 of the available 25 points. DOE reduced the total number of points earned by one (1) point (from 25 points to 24 points) due to the quality of the report. LANL's report lacked totals for the number of vehicles that were reviewed and the type of vehicle, i.e., discretionary, non-discretionary.

Performance Objective #4	**Good - 74%** **Points Earned – 37**

INFORMATION TO IMPROVE/MAINTAIN PROCESSES (SYSTEMS EVALUATION): The Laboratory ensures that Property Management programs are consistent with policies and procedures approved by DOE. **(Weight = 10%/Total Points = 50 Earned = 37)**

4.1 ***SELF-ASSESSMENT OF POLICIES AND PROCEDURES:*** *The Laboratory shall plan, conduct, document, and report annually, the results of a successful property management system evaluation.* **(Weight = 10%/Total Points = 50 Earned = 37)**

4.1.a ***Assessing Support Processes:*** *The property processes shall be measured against identified system evaluation criteria established in the plan.* **(Weight = 10%/Total Points = 50 Earned = 37)**

DOE Rating: Good - 37 Points

Note: The Disposal Process is defined as the Property numbered items declared excess by custodian through final disposition by JCNNM.

The following five functional areas were evaluated by LANL in accordance with the DOE approved Three-Year System Evaluation Plan:

REPORT OF LOST, DAMAGED AND DESTROYED (RLDD)

- **LANL's self-assessment indicates that the Laboratory conducted a laboratory-wide awareness program throughout the year to communicate RLDD policies and procedures. For example, Property Management incorporated the Laboratory's RLDD policies and procedures into the General Employee Training (GET) session that is a requirement for each new employee at LANL. Awareness training was included during new Employee Orientation for BUS employees throughout the year, RLDD awareness messages were printed on the employee pay stubs for three pay periods, and an awareness campaign was advertised and incorporated into LANL's Annual Property Awareness Fair held in August 1999. LANL earned two of the available two points for this area.**

- **LANL randomly selected 24/227 completed RLDD's and conducted a comprehensive evaluation for compliance against approved policy. LANL determined that one of the most common shortfalls in procedural compliance was the requirement of reporting RLDD property to the Property Administrators, management, and the Special Projects Office (Security). LANL earned three of the available three points for this area.**

FUNCTIONAL AREA: PROPERTY MANAGEMENT

- **LANL's documented comprehensive root cause analysis reflects trends leading to discrepancies. Although the individual conducting this evaluation provided recommended corrective actions, LANL failed to develop and implement a formal corrective action plan that would reflect progress toward planned milestones as required in the measure. Accordingly, LANL earned one of the available three points for this area.**

  Based on DOE's validation of LANL's self-assessment report, interviews, and supporting documentation, overall, LANL earned six of the available eight points on its self-assessment of the RLDD process.

HIGH RISK

- **LANL's High-Risk procedures were found to be comprehensive and are approved by DOE. LANL earned two of the available two points for this area.**

- **All property numbered items are entered into LANL's Excess Property Information System (EPIS) and are subject to a High-Risk review. JCNNM has strict guidance not to pick up property-numbered items without the required review. Two items that met the High-Risk program requirements were inadvertently not reviewed by LANL; they were subsequently identified by JCNNM at the staging area. Because the items initially missed the required high-risk review, LANL did not earn any of the available four points for this area.**

- **Items disapproved for general public sale were handled in accordance with DOE High-Risk procedures. Of the ten items disapproved for public sale, JCNNM was given notification and recommendation for disposal. LANL earned four of the available four points for this area.**

- **LANL's High-Risk program was revised to reflect policy and procedural changes. The BUS-6 Customs Office has a on-line High-Risk training program utilizing the formal process required by LANL's Training and Development Office, whereby a formal lesson plan, learning objectives and a quiz are prepared and documented. The training module was presented to the Nonproliferation and National Security Institute (NNSI) and BUS-6 Property Management employees. A video presentation of this course was developed to augment the High-Risk program and was presented during the LANL annual Property Awareness Fair. LANL earned three of the three available points for this area.**

  Based on DOE's validation of LANL's self-assessment report, interviews, and supporting documentation, overall, LANL earned nine of the available 13 points on its self-assessment of the RLDD process.

DISPOSAL REUTILIZATION PROGRAM

- **LANL BUS-6 conducted numerous training sessions for custodians and property personnel covering disposal and reutilization policies and procedures. LANL earned two of the two available points for this area.**

- **LANL's self-assessment report stated that 123 items valued at $464,379 were reutilized through the SWAP shop in lieu of new procurement. However, DOE's validation at**

the time of the BMOR revealed that the value was reported incorrectly. Additionally, LANL reported that the Laboratory transferred in 505 items valued at $1,388,435 for reuse. DOE's validation of the data revealed that these figures were incorrect also in that the total items transferred in was 530 valued at $1,859,981. There were three reasons for the erroneous data: 1) the process for calculating the totals is manual (human error occurred in tabulating totals), 2) misfiled/unfiled Material Shipping Reports (MSRs) resulted in their exclusion from the report causing an under reporting, and 3) MSRs reported as LANL transfers were included in this total; however, during DOE's validation process, LANL determined that the MSRs should have been reported under another program. LANL earned zero out three available points for this area.

- **A team of cross-functional organizations was developed to review SWAP procedures. Several process improvements were identified. Video training modules were developed and offered to LANL Property Administrators. Prior to the training, 17 items were residing in the "pending" SWAP file due to incomplete ES&H screening. The effectiveness of the training was evidenced by the reduction of pending items reducing them from 17 to one. Additionally, the team developed and implemented an electronic certification of the sanitation review. LANL earned three of the three available points for this area.**

- **During the first two quarters of FY99, 100% of the property was disposed of within the 180-day time frame. During the 3rd quarter, 95% of the items were disposed of within the required time frame; however due to the DOE-imposed moratorium, no items were processed during the 4th quarter. LANL earned three of the three available points for this area.**

- **Property numbered items, transferred to external customers, are tracked and reported to LANL and DOE by required reporting due date. Although the report was received on a timely basis, the report was incomplete and required modifications. LANL earned two of the three available points for this area.**

Based on DOE's validation of LANL's self-assessment report, interviews, and supporting documentation, overall, LANL earned 10 of the available 14 points on its self-assessment of the Disposal/Utilization process.

<u>SUBCONTRACTOR-HELD PROPERTY</u>

- **LANL reviewed 100% of its subcontractor personal property programs as required. On-going follow-up ensured that deficiencies were brought into compliance. Of the 120 subcontractors, only seven have issues that require further follow-up by LANL. This area improved since DOE's last compliance-type review. LANL earned three of the three available points for this area.**

- **Of the subcontractors holding GFP, 15 did not submit the required inventory reports. Although BUS-6 had on-going dialog with Procurement relative to GFP issues, DOE found and expressed concern that there are long delays from the time BUS-6 identified problems to the time Procurement provided the guidance for resolution. As a result, BUS-6 heightened their concerns with LANL Procurement requesting assistance in communications with the subcontractors. Procurement agreed to partner with BUS-6 to resolve issues on a more timely basis. Effective partnering**

between property and procurement could ensure ongoing communication and responsiveness from LANL's subcontractors with GFP. Based on DOE's review of GFP documentation, another opportunity for partnering is in the area of subcontractor closure of GFP property. LANL earned zero of the three available points.

- **LANL reconciled 100% of the PAIRS records to the official property files. LANL earned four of the four available points in this area.**

Based on DOE's validation of LANL's self-assessment report, interviews, and supporting documentation, overall, LANL earned seven of the available ten points on its self-assessment of the Subcontractor-Held Property process.

NUCLEAR WASTE FUND PROPERTY (NWF)

- **LANL has 315 NWF items utilized by nine organizations. One hundred percent review of NWF property was conducted by each of the nine organizations. The review consisted of accuracy of database designation for NWF items, current status, storage, disposal and utilization. BUS-6 conducted a 10% validation in each of the nine organizations and found no discrepancies. LANL earned three of three available points in this area.**

- **BUS-6 assessed that the disposal/destruction policies and procedures were being followed for excessing NWF property by reviewing JCNNM's disposal records on all activity for the past four years. BUS-6 determined that all dispositions were properly accomplished in accordance with required disposal procedures/authorization of the NWF program. It was observed that some of the NWF items were obsolete and should be reviewed for reutilization and/or possible disposition. The nine organizations were notified of the under utilization and some organizations have begun to take corrective action. LANL earned two of the available two points in this area.**

Based on DOE's validation of LANL's self-assessment report, interviews, and supporting documentation, overall, LANL earned five of the available five points on its self-assessment of the Subcontractor-Held Property process.

Overall, for Performance Objective #4, based on DOE's validation of LANL's self-assessment report, interviews, and supporting documentation, LANL earned 37 of the available 50 points.

Performance Objective #5	**Outstanding - 100%** **Points Earned – 25**

CUSTOMER ALIGNMENT: The Laboratory shall ensure that there is a property management program for identifying and evaluating customer needs and for building and maintaining positive customer relations.
(Weight = 5%/Total Points = 25 Earned = 25)

5.1 ***MONITORING CUSTOMER ALIGNMENT:*** *The Property Management organization shall ensure that the property management programs are responsive to customer expectations.*
(Weight = 5%/Total Points = 25 Earned = 25)

FUNCTIONAL AREA: PROPERTY MANAGEMENT

5.1.a ***Aligning Customer Expectations:*** *The Laboratory will have processes in place to monitor customer expectations of property management tools and products with regard to ease of use, timeliness, accuracy, and certainty.* **(Weight = 5%/Total Points = 25 Earned = 25)**

DOE Rating: Outstanding - 25 Points

Customer Input

LANL sought customer input through several means, including a comprehensive Laboratory-wide survey on Park and Ride; presentations to Property Administrators on draft property manual training modules for the purpose of acquiring feedback; the development of a video on High Risk by the Customs Office with input/participation of BUS-6, Property Administrators, and JCNNM; as well as customer feedback received during scheduled walk-throughs. LANL earned six of the available six points in this area.

Teaming Initiatives

LANL was the catalyst for including other Laboratory organizations such as Property Administrators from various organizations and the Property Accounting Group in property-initiated Continuous Quality Improvement (CQI) teams. BUS-6 requested their participation in planning meetings as a means of acquiring feedback on the Property Training program. The teaming initiatives resulted in the enhancement of two major property services: 1) accurate identification and entry of nomenclature information into the PAIRS database, and 2) the development and implementation of an on-line process for property transfer slips. LANL earned five of the available five points in this area.

Internal Customer Communications

Electronic messaging is the primary method used by BUS-6 to communicate with its' internal customers; however, depending on the audience, LANL uses a variety of tools to best reach the population. For example, to communicate the need to sign an accountability statement, the message is usually communicated via e-mail or fax. During this review period, the use of the web was a new approach to reach BUS-6 customers. The web was used to communicate the results of the Customers survey by providing status reports to the Voice of the Customer population. The LANL web site was also used to post property-related messages in the electronic bulletin board. The LANL Quality Planning Office Communication Model is BUS-6's most formal process for communicating. Other processes include one-on-one communication and training, News Bulletin articles, Property Updates, News flashes, and the Property Hot Line. LANL earned six out of the available six points in this area.

Training/Awareness to Customers

BUS-6 provided training sessions to the Laboratory's Property Administrators on all 15 Chapters of the newly updated Property Management Manual. During the second phase of training, the sessions were video taped and made available through the Property library to accommodate the customers' needs. To further accommodate customers, a TV/VCR unit with headphones will be available so those customers can view the tapes at their convenience and without distractions. LANL's training program was well planned and successfully accomplished. DOE attended some of the training sessions. LANL earned 8 of the available 8 points in this area.

FUNCTIONAL AREA: PROPERTY MANAGEMENT

Overall, for Performance Objective #5, based on DOE's validation of LANL's self-assessment report, interviews, and supporting documentation, LANL earned 25 of the available 25 points for Customer Alignment.

Performance Objective #6	**Outstanding - 100%** **Points Earned – 50**

BALANCING PERFORMANCE AND COST: The Laboratory ensures that property is managed appropriately to balance performance and cost. **(Weight = 10%/Total Points = 50 Earned = 50)**

6.1 ***BALANCING PERFORMANCE/COST RATIOS:*** *The Laboratory shall ensure that property processes/products are provided in the most cost efficient manner while maintaining desired levels of performance*. **(Weight = 10%/Total Points = 50 Earned = 50)**

6.1.a ***Measuring Cost Efficiency/ Effectiveness:*** *The Laboratory shall measure its ability to effectively balance property management costs and performance.*
(Weight = 10%/Total Points = 50 Earned = 50)

DOE Rating: Outstanding - 50 Points

Assumption:

- *Where properly justified and approved by DOE, the Laboratory may elect to establish a measure that extends over two evaluation periods. The first year the Laboratory will submit a plan outlining the approach to be employed in establishing an appropriate baseline and developing the gradients for the following evaluation period. Approach and deployment of the plan will be evaluated the first year. The final milestone of the plan will be to develop gradients for results desired by the end of the second year. These gradients will be the basis for evaluation in the second evaluation period.*

NOTE: The matrix provided below was used to score the selected activities.

GRADIENT

	Performance Level			
Cost Vs Baseline Plan Developed Each Year	**Higher Gradient or Outstanding**	**Same Gradient**	**Lower Performance and Not Less Than Good**	**Lower Performance and/or Less Than Good**
Less Cost	Outstanding	Excellent	Good	Marginal
Same Cost	Excellent	Good	Marginal	Unsatisfactory
More Cost	Good	Marginal	Unsatisfactory	Unsatisfactory
More Cost More Requirements	**Renegotiate Performance Gradients for Critical Activities**			

FUNCTIONAL AREA: PROPERTY MANAGEMENT

The Laboratory, with DOE approval, implemented this measure to extend over a two-year period. For the first year (FY99), 50 points are available for the approach and deployment of LANL's documented two-year plan. If 100% of the plan was not accomplished, LANL was to receive only 60% of the available points. During FY00, the rating for the second half of this measure will be based on LANL's ability to achieve desired results depicted in the matrix above.

The process LANL selected for this measure was the design and implementation strategy for the development of a plan to conduct the wall-to-wall inventory via the use of the Property Custodian Individual Accountability Statement (CAS). LANL developed, tested, then submitted a proposal to DOE for conducting a pilot Inventory By Accountability Statement (IAS). Based on LANL's inventory performance over the past six years and the documented approach for IAS, DOE approved the Pilot proposal on November 1, 1999.

Considerable planning and coordination effort went into the development of the plan. LANL BUS-6 tested the IAS to ensure its feasibility, captured baseline costs, and captured and baselined personnel time and effort. A mini pilot was first conducted on BUS-6 Division, followed by a pilot for a larger population using BUS Division. LANL's goal for this two-year measure is to position the Laboratory to utilize the accountability statement as the primary tool to conduct future inventories. LANL's long-standing opinion of the value and extent of the CAS is that it is the foundation and cornerstone of its Property Management system. The improvements made over the past years attribute to individual accountability and responsibility at LANL. Based on the proposal submitted by LANL, the IAS appears to have great potential to be less cumbersome and more cost effective. LANL is proceeding with training for the Property Administrators and has plans for a large awareness campaign for the IAS that was initiated shortly after the approval of the Pilot plan.

LANL is to be commended for the commitment and unceasing efforts taken by the individuals working this initiative to test and document the feasibility of this innovative approach to inventory. Lastly, BUS-6 sought out and earned early support from LANL's senior management. DOE was encouraged to participate in much of the process for better understanding of the proposal.

Overall, for Performance Objective #6, based on DOE's validation of LANL's self-assessment report, interviews, and supporting documentation, LANL earned 50 of the available 50 points.

Performance Objective #7	**Outstanding - 100%** **Points Earned – 25**

ORGANIZATIONAL VITALITY: The Laboratory shall ensure that there is a program for achieving and maintaining organizational vitality in the property management organization.
(Weight = 5%/Total Points = 25 Earned = 25)

7.1 ***EVALUATION OF ORGANIZATIONAL AGILITY AND EMPLOYEE ALIGNMENT:*** *The Laboratory will foster organizational agility and employee alignment in its property management organization.*
(Weight = 5%/Total Points = 25 Earned = 25)

FUNCTIONAL AREA: PROPERTY MANAGEMENT

7.1.a ***Measuring Organizational Agility and Employee Alignment:*** *The Laboratory will have a process in place to measure organizational vitality as well as to understand and address workforce expectations.* **(Weight = 5%/Total Points = 25 Earned = 25)**

DOE Rating: Outstanding - 25 Points

Assumptions:

- *Organizational vitality is the alignment of organizational performance goals and workforce skills (both current and future). The Laboratory will develop scorecards to evaluate elements determined necessary to ensure its workforce is ready for current and future operations and projected challenges. Elements to be evaluated and scored will be submitted to and approved by DOE as part of the annual Personal Property Assessment Model (PPAM) finalization process.*

Learning and Growth

The appraisals of Property Management BUS-6 employees included the requirement to perform and achieve an acceptable level of performance in all Appendix F property measures. One hundred percent of BUS-6 Property staff appraisals were reviewed against the Property Performance Assessment Model Plan (PPAM) as required. LANL earned ten of the available ten points for this area.

One hundred percent of BUS-6 Property employees were provided an opportunity to identify their desired areas of skill enhancement as well as those identified by their immediate supervisor. DOE reviewed personal development and growth documentation that reflected the majority of training was accomplished except where budget or class availability was prohibitive. LANL earned five of the available five points for this area.

Organizational Climate

LANL employees are encouraged to actively participate in the development of the BUS-6 yearly business plan. The plan defines the groups mission, vision and long/short term goals. It provides each employee an opportunity to participate in identifying and prioritizing projects for the year and is in direct alignment with the Division Business Plan. It also incorporates the elements from the Appendix F performance measures and the individual annual employee performance and development plan. LANL earned five of the available five points for this area.

Environmental Safety and Health

BUS-6 conducted monthly management safety walkarounds. All discrepancies noted were tracked in an official Laboratory safety and tracking database. One hundred percent of the noted deficiencies found during the 12-month period were addressed and completed. Training and development of local BUS-6 safety awareness material was initiated. LANL earned two of the available two points for this area.

As a means to communicate safety related issues to employees, LANL held monthly meetings to discuss safety and health issues. Various safety topics and films were presented. LANL earned two of the available two points for this area.

FUNCTIONAL AREA: PROPERTY MANAGEMENT

Lastly, BUS-6 employee workstations were evaluated for appropriate ergonomics when requested. One hundred percent of the ergonomic concerns were addressed for BUS-6 employees. LANL earned one of one available point for this area.

Overall, for Performance Objective #7, based on DOE's validation of LANL's self-assessment report, interviews, and supporting documentation, LANL earned 25 of the available 25 points for Organizational Vitality.

FUNCTIONAL AREA: PROPERTY MANAGEMENT

EXHIBIT I
PROPERTY MANAGEMENT
SCORING TABLE

PPAM Points Earned	Translation to Appendix F Contractual Scoring	Adjectival Rating
493-500	98	**Outstanding**
484-492	95	
475-483	92	
469-474	88	**Excellent**
460-468	85	
450-459	82	
433-449	78	**Good**
417-432	75	
400-416	72	
384-399	68	**Marginal**
368-383	65	
352-367	62	
336-351	58	**Unsatisfactory**
320-335	55	
304-319	52	